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Can internet blogs be used as an effective advertising tool? The role of product blog type and brand awareness

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Abstract

Purpose – As blogs have become an important information communication medium, selecting blog types that are appropriate and effective for the products they are to promote is now an important issue in corporate advertising. However, the impact of different blog types on consumers and their advertising effectiveness are issues seldom addressed in the existing literature. The purpose of this paper is to view product information that consumers post on blogs as advertisements and compares advertising effectiveness between different blog types to help enterprises properly employ blogs in their marketing campaigns.

Design/methodology/approach – An experimental design was adopted, and 12 experimental contexts were designed. A valid sample of over 2,000 responses was collected to study between-group differences in advertising effectiveness.

Findings – The analytical results showed between-group difference in advertising effectiveness, which indicated that blog advertising effectiveness varies with different combinations of product constructs and blog types.

Research limitations/implications – The limitations of this study related to the price factor was not incorporated into the experimental model, and shopping channels were not limited. There might be a gap between the prices of the experimental products and the average expense of online shoppers.

Originality/value – The study proposed a framework which can help enterprises to evaluate the type and brand awareness of a product to be promoted and to select the blog type that maximizes advertising effectiveness (perceived risk, ad attitude, brand attitude, and purchase intention) in diffusing product information.

Keywords Blog, Brand awareness, advertising effectiveness, Advertising endorser, Product type

Paper type Research paper



1. Introduction

Rather than browsing and collecting web data, Web 2.0 allows users to also become content creators by composing, editing, modifying, and exchanging data. An early 2007 market survey by Jupiter Research showed that 75 percent of internet users are

18-25 years old. These users read and write internet content. However, content creation is not dominated by young users. One third of users above 55 years of age report having experience in content creation as well (Wertime and Fenwick, 2008). Because most blogs provide a very user-friendly interface, personal blogging is a fad throughout the world, and blog use has grown rapidly. A report released by Sifry (Technorati, 2007) indicated that the number of blogs around the globe has exceeded 70 million, and 120,000 new blogs and 1.5 million new posts are added daily. Pollster Online Survey also reported that 93.8 percent of internet users have browsed blogs, and 66.6 percent have a personal blog. These statistics reveal the prevalence of blogs. Because they embed rich digital content, blogs are expected to be an important digital information source in the Web 2.0 era.

In the information systems domain and specifically internet studies the question of why people blog has been asked as a valid research question on what motivates people to blog. According to Hsu and Lin (2008) and based on the theory of reasoned action individual motivating factors include ease of use and enjoyment, knowledge sharing and social factors such as community identification. Apart for commercial purposes blogs have also been studied in the work place where they can be used as communication and knowledge sharing tool. According to Papadopoulos *et al.* (2013) intention to use blogs in the work place can be related to employees self-efficacy, perceived enjoyment, outcome expectations, and attitudes toward information sharing in general. Another domain where blogging has been suggested as a potential transformational technology for teaching and learning is that of the higher education sector (Williams and Jacobs, 2004). Vrana and Zafiroopoulos (2010) indicated blogs, instant messaging, online reviews, and recommendations are becoming the new digital form of word of mouth. Blogs are becoming a very important information source for consumers for obtaining product advice and suggestions. Blogs can impact on consumers' evaluation of products and their decision-making process. Moreover, Xiang and Gretzel (2010) also pointed out the functions of blogs in creating and sharing new experiences, trustworthiness to online travelers, and the use of blogs as marketing intelligence.

As the prevalence of internet applications increases, users are beginning to rely heavily on information available on the internet. "Information search" has thus become an important internet use behavior. A study of consumer intention and behavior showed that 87 percent of the 8,000 consumers sampled search for product information and appraisals posted by other consumers before making purchasing decisions. As blogs have become an important information communication medium, selecting blog types that are appropriate and effective for the products they are to promote is now an important issue in corporate advertising. However, the impact of different blog types on consumers and their advertising effectiveness are issues seldom addressed in the existing literature.

Thus, this study views product information that consumers post on blogs as advertisements and compares advertising effectiveness between different blog types to help enterprises properly employ blogs in their marketing campaigns. According to product type and brand awareness, they can select a suitable blog type and use it as a medium to diffuse their product information. In doing so, a research framework is proposed in this study which classifies blogs into three types (celebrity blog, expert blog, and typical consumer blog) and defines product type (experience product and search product) and brand awareness (high and low) as two product constructs. In sum, this paper compares advertising effectiveness between different blog types; advertising effect of interaction between blog type and product type; and changes in

advertising effectiveness caused by the interaction effect between blog type and brand awareness.

This paper will first provide a review of the relevant academic literature and development of the hypothesis. Next, it will provide an overview of the research methods, after which findings will be presented and discussed. The last section of the paper will outline conclusions, limitations, and suggestions for further research.

2. Theoretical background and hypotheses building

Advertising effectiveness

Wright *et al.* (1977) contended that advertising can be defined from either a marketing perspective or from a communication perspective. From the marketing perspective, advertising is any paid form of non-personal presentation and promotion of ideas, goods or services by an identified sponsor. From the perspective of communication, advertising convey persuasive information through mass communication media. The main effects of advertising are the sales effect and the communication effect (Lavidge and Steiner, 1961). Studies of the communication effect focus mainly on a series of responses in cognitive, affective, and conative dimensions of consumers after stimulation by an ad message. The cognitive dimension includes recognition and understanding; the affective dimension includes liking and preference; the conative dimension includes determination and buying. From the communication perspective, the purpose of advertising is to convey persuasive information via mass communication media (Wright *et al.*, 1977). This study views product recommendation information on blogs as advertising from the communication perspective to explore the advertising effectiveness of blogs. The advertising effectiveness of blogs is measured by four variables: perceived risk, advertising attitude, brand attitude, and purchase intention.

This analysis views perceived risk as the subjective perception of expected losses. Consumers may perceive uncertainties and adverse outcomes when purchasing a product or service (Stone and Gronhaug, 1993).

For example the credibility of the blogger which seems to naturally affect user's perception of taking a risk following a bloggers recommendation does not seem to have a significant effect. In reality no difference was found in the impact of the blog among bloggers who would reveal the information or not (Chesnay and Su, 2010).

Advertising attitude is defined as the propensity of the consumer to continuously like or dislike a certain advertising after repeated exposure to the advertising (MacKenzie and Lutz, 1989). Brand attitude is the propensity to continuously like or dislike a specific brand (Fishbein and Ajzen, 1975). Purchase intention refers to the willingness of the consumer to purchase products of an advertised brand (MacKenzie and Lutz, 1989).

Blog type

The term blog is derived from weblog, which is a technical record on web servers. Blogs are a new information exchange method that emerged became widely used after email, electronic bulletin board, and instant messaging. In fact, blogs have existed for several years but were not widely known until Jorn Barger first coined the term "Weblog" in 1997, which defined it as a way to present personal logs on web pages (Wright, 2006). In recent years, browsing blogs has become a major internet activity. Some blogs have millions of regular visitors. By frequently reading and exchanging information on blogs, visitors develop strong bonds and close interpersonal relations.

Thus, they are likely to trust and apply the information published on blogs (Bansal and Voyer, 2000). The numbers of blogs and their content have grown rapidly in recent years. Consumers have more channels for publishing and searching for information about products and experience using certain products. Frequently visited theme blogs and other popular blogs are a particularly important information source that consumers browse, adopt, and trust. These blogs often have great influence on purchasing behavior. As blogs are becoming a powerful advertising medium, blog marketing considered a promising advertising model and marketing approach.

Roberts and Kraynak (2008) argued that consumers can create either a positive or a negative impact on the organization based on the image this organization presented online. Thus, word of mouth from blogs can influence brands' reputation. Moreover, El-Haddadeh *et al.* (2012) demonstrated that risk and insecurity will result to untrust and negative word of mouth among the Chinese consumers. In other words, trust plays a main role in assisting customers overcome perception such as risk and insecurity. Therefore, risk is an important factor in e-commerce environment because it has an impact in consumer's behavior.

Studies of endorsement advertising usually focus on two aspects: "endorser reliability" and "endorser type." Senecal and Nantel (2004) proposed that recommendation sources be classified as human experts, recommender system, and other consumers. Human experts refer to salespersons and experts. Recommender system refers to individualized commodity recommendation mechanisms provided by online stores. Other consumers include relatives, friends, and acquaintances. Their study suggests that recommender systems are more influential to consumers than other consumers and human experts. Freiden (1984) explored the effect of endorsers, endorser gender, and viewer age on advertising effectiveness and classified endorsers into four types: celebrity, high-ranking executive, expert, and typical consumer. Based on the views of Senecal and Nantel (2004) and Freiden (1984), this study similarly classifies blog types as celebrity blog, expert blog, and typical consumer blog. When information seekers search for product information on the web, they consider the professionalism (Money *et al.*, 1998), content relevance, and integrity (Cheung *et al.*, 2008) of the information source. Experts and typical consumers have better communication effects. Expert opinions are more reliable to consumers and can deepen their impression about the product (Wang, 2005). The more professional the information source, the more influential its word-of-mouth recommendation (Reingen and Kernan, 1986). The professional competence and experience of the information provider that is perceived by the information receiver has an important effect on the purchase decision made by the information receiver (Bansal and Voyer, 2000). Consumers are likely to consider the professionalism, credibility, and attractiveness of each information source when searching for information related to a product. Therefore, the following hypothesis is proposed:

- H1. The attributes of advertising effectiveness (a: perceived risk; b: ad attitude; c: brand attitude; d: purchase intention) vary according to blog type.

Product type

Nelson (1974) classified products as experience products, search products, and credence products. Information about search products is readily available and their attributes, such as size and price, can be evaluated before purchase. Experience products have attributes, such as taste and fitness that are difficult to evaluate (Alba *et al.*, 1997) until they are actually used (Chiang and Dholakia, 2003). Online information search techniques are more advantageous for search products because the perceived cost of

providing and evaluating the goods is low. Many products have attributes of both product types. For instance, apparel products have attributes of search products, such as producing nation and model, and their fitness is an attribute of experience products (Alba *et al.*, 1997). The boundary between the two product types is not fixed since, through demonstration and provision of a sample, an experience product can be converted into a search product. Advancing internet technologies now allow consumers to “virtually experience” goods online before buying them, and experience products are often converted into search products (Klein, 1998). Because the quality of experience products is unknown before purchase, consumers value recommendations made on the internet (Senecal and Nantel, 2004). Some important attributes of experience products cannot be known before the products are actually purchased and used. The costs of these products, such as movies, restaurants, tour packages, perfume, and sunglasses, are usually high (Chiang and Dholakia, 2003; Zeithaml, 1981). However, they can obtain attributes of search products, such as furniture, computer desktop, camera, and mobile phone, through information search before buying or using them (King and Balasubramanian, 1994; Senecal and Nantel, 2004; Zeithaml, 1981).

Although consumers can certainly obtain product information, they may not have the practical experience of an experience product without buying or using it. Therefore, we propose that classifying products as search products or experience products to compare the advertising effectiveness of blogs between different product types is highly appropriate in the digital era. We define experience products as “products characterized by certain important attributes that cannot be known through information search but only through purchase and actual use and search products are those characterized by attributes that can be known through information search before actual purchase or use. Product type affects the use and choice of information by consumers” (King and Balasubramanian, 1994). Consumers are unlikely to perceive certain important attributes of experience products through information search. Instead, they are more likely to trust product recommendations and appraisals from other consumers (Wang, 2005). Descriptions of user experience and feedback on blogs are important references for consumers, so credibility of information sources is crucial (Jain and Posavac, 2001). Because different products have different experience and search attributes, the information sources chosen by consumers varies, and advertising effectiveness of the information varies as well. Therefore, we hypothesize the following:

- H2.* Attributes of advertising effectiveness (a: perceived risk; b: ad attitude; c: brand attitude; d: purchase intention) are affected by the interaction effect of blog type and product type.

Brand awareness

A brand consists of a name and a label that distinguishes a product or a firm from its competitors. The literature refers to brand value as brand equity, which is determined not by the product provider but judged from the perspective of customers. Brand awareness is how readily consumers can think of certain attributes of a familiar product. These attributes simplify product information and purchase decisions. When consumers choose from among several products in the same category, the products with high brand awareness are likely to be in their consideration sets (Keller, 1993). Brand awareness plays a crucial role in consumer decisions. Consumers tend to choose familiar brands with high brand awareness when making purchase decisions. Brand awareness is a tool that simplifies purchase decisions. They infer the quality of

a product based on its brand awareness and have higher intention to purchase familiar brands of products than to purchase those of unfamiliar brands.

In an online context, when consumers have to select a brand to meet their needs, they logically will choose from among those brands that come to mind by visiting the web sites of the brands they recall or putting the brand name in the search engine. Product awareness on the internet also may affect purchase intention. The greater the consumer's product awareness, the greater the reduction in the perceived risk associated with the acquisition of that product. Users who perceive a greater risk are likely to search with a clear aim in mind, rather than just for the purpose of browsing online. To secure an online purchase, marketers should consider the use of communication tools that jointly increase brand, product, and message awareness (Crespo-Almendros and Del Barrio-Garcia, 2014). Huang and Sarigöllü (2012) demonstrated that brand awareness influences consumer purchase decisions. Creating brand awareness is the first step to ensuring that a product is included in the consideration set of a potential consumer because brand awareness can further affect their decisions. This study defines brand awareness as the ability of a customer to recognize or recall a brand and includes brand awareness as a research variable.

Richardson *et al.* (1994) proposed that a brand represents an aggregate of information about a product and is an extrinsic cue for inferring product quality. Consumers usually perceive high quality in products of well-known brands. However, they cannot infer the quality of lesser-known brands from the product information, so they refer to extrinsic cues. Meanwhile, professional information sources and abundance user experiences provided by these sources become an important reference for purchase decisions. Therefore, we argue that advertising effectiveness is affected by the interaction effect between brand awareness and blog type and propose the following hypothesis:

- H3.* The attributes of advertising effectiveness (a: perceived risk; b: ad attitude; c: brand attitude; d: purchase intention) are affected by the interaction effect between blog type and brand awareness.

Based on the above analysis, we have proposed a research framework, illustrated in Figure 1. This study explores the effects of blog type on advertising effectiveness as well as the interaction effects of product types, blog types, and brand awareness on advertising effectiveness.

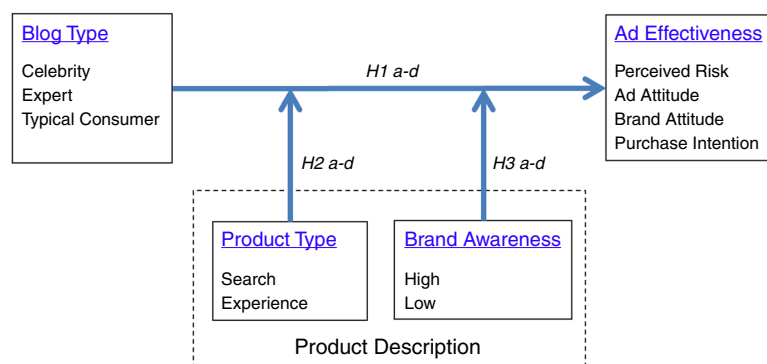


Figure 1.
Research
framework

3. Methodology

Experimental design

An experimental design was chosen to evaluate three factors, including blog type, product type, and brand awareness. The analysis included three blog types (celebrity blog, expert blog, and typical consumer blog), two product types (experience product and search product), and two levels of brand awareness (high and low). Since an experimental design is one in which participants are randomly assigned to levels of the independent variable. Experimental designs are preferred in this case to make cause-and-effect conclusions because they reduce the risk that the results could be due to a confounding variable. We did not choose quasi-experimental design because the major criticism of quasi-experimental designs is that they cannot control for selection bias as well as experimental methods, in that comparison groups can only be matched by variables that are known to the research (Silver, 1998).

Through a pre-test, this study first selected representatives of celebrity blogs, experience products, search products, products of high brand awareness and products of low brand awareness. In all, 12 experimental contexts were created. In each context, the blog contained feedback and appraisals regarding a product. Based on the between-subject design, the subjects were randomly assigned to the experimental groups for testing in different contexts. This design prevented the subjects from knowing how the experiment was manipulated and to avoid disturbing the experimental results. Individual differences between subjects were also widely distributed, so between-group differences caused by individual differences were avoided. The questionnaires were randomly distributed to the subjects. Each subject was assigned to only one experimental context and was required to complete the questionnaire after viewing the assigned blog.

The first section of the questionnaire contained items measuring advertising effectiveness. By manipulating the experimental contexts, each subject was asked to evaluate the perceived risk of the product, advertising attitude of the blog article, their brand attitude and purchase intention after viewing the content of given blogs, including the author, recommended product, brand, product appraisal, and user feedbacks. The second section measured the propensity of the subjects to trust. The last section surveyed personal data.

Pre-test

The purpose of conducting a pre-test was to confirm the representatives of each product type, each blog type, and high and low brand awareness products. First, 20 products were selected through expert discussion and reviews of the literature on experience products. In total, 31 undergraduate and graduate students participated in the pre-test. The method adopted by Chiang and Dholakia (2003) was employed. Based on mean scores, hair salon services, skin care products, financial consultancy, and tour products were selected as experience products; mobile phones, computers, magazines, and cameras were selected as search products. With product involvement (Ratchford, 1987) and product knowledge considered, "tourist products" and "mobile phones" were selected as representative experience products and search products, respectively.

Celebrity endorsers were selected according to the results of "The Best Advertising Endorsers of Summer 2006," a survey conducted by Taylor Nelson Sofres (TNS) was employed. In total, 20 celebrities were selected based on discussions with ten consumers. A representative celebrity endorser, Lin Chi-ling, was selected according to measures of advertising endorsers (Freiden, 1984) and the fitness between product and

celebrity endorsement. Based on the method developed by Aaker (1996) in his study of brand equity, brand awareness was measured in terms of “recognition” and “recall.” Among the cell phone brands, NOKIA had high brand awareness, and UTEC had low brand awareness. Among the brands of tour products, ezTravel was selected as a high awareness brand, and Mastery Travel was selected as a low awareness brand.

Manipulation of contexts

This study classified blogs as celebrity blogs, expert blogs, or typical consumer blogs. Product photos and descriptions were displayed for each blog type. The experience and expertise of the bloggers were described as “cell phone master” or “tour master” in the introduction section of the expert blogs to indicate that they were experts in cell phones or tour products. In typical consumer blogs, the introduction section explicitly indicated that the purposes of the blog were to keep a journal of life and to express personal feelings.

According to the Tourism Bureau, Ministry of Transportation and Communication, Hong Kong was the most popular overseas destination of Taiwan tourists in 2008, and the average tourist visit was two to three days. Therefore, the tour product called “3 Day Backpacking Tour to Hong Kong” was designed. As to the search product, the specifications and functions of the latest mobile phones were surveyed, and a virtual cell phone model called “W88” was designed. Its main features including a large touch screen, MP4 audio/video playback, and a GPS navigation system. Among the brands of tour products, ezTravel had high brand awareness, and Mastery Travel had low brand awareness. Of the mobile phones, NOKIA had high brand awareness, and UTEC had low brand awareness. These brands were directly described in blog articles.

The questionnaire items for perceived risk and purchase intention were measured on a seven-point Likert scale from 1 (strongly disagree) to 7 (strongly agree). Items for advertising attitude and brand attitude were designed to be measured on a seven-point semantic Likert scale. Items for perceived risk were as follows: this product may be defective; this product is a waste of money because it will not work or it will cost more than it should to maintain it; this product is extremely risky/not risky in terms of how it will perform (Sweeney *et al.*, 1999). Items for advertising attitude were: my overall impression of this blog article is bad/good; I think the content of this blog article is detestable/likable; I feel displeased/pleased when reading this blog article (Ducoffe, 1996). Items for brand attitude were: I think this brand is reliable/unreliable good; I dislike/like the products or services of this brand; I am satisfied/disappointed with this brand (Bruner and Hensel, 1992). Items for purchase intention included: I would consider buying this product; I will purchase this product; I am very likely to buy this product; I will recommend this product to my friends (Sweeney *et al.*, 1999).

Data sampling

The research subjects were general internet users. Because the population size and range were fuzzy, random sampling method was difficult to perform. Therefore, convenience sampling was adopted. The questionnaire was conducted online. Survey information was published on PTT BBS, the largest online Bulletin Board System in Taiwan. Since it was established in 1995, PTT has become not only the largest BBS in Taiwan, but also the largest Chinese BBS in the world. The blog had more than 1.5 million members as of the end of 2008. To attract more respondents, all participants

were given a chance to win NT\$2,000. Each subject was then randomly assigned to one of 12 contexts. By convenience sampling of general internet users in Taiwan, a valid sample of 2,134 responses was obtained; 47 percent (1,002 persons) of the respondents were male, and 53 percent (1,132 persons) were female. In terms of age, the largest age group was 21-25 years old (61.3 percent, 1,390 persons), and the second largest age group was 26-30 years old (22.1 percent, 471 persons). In terms of occupation, the largest group was students (62.9 percent, 1,342 persons) followed by those with stable jobs (29.6 percent, 631 persons). Table I presents the distribution of the sample across the contexts.

4. Research findings

As Table II shows, the Cronbach's α values for all the constructs were higher than 0.7, which confirmed the good internal consistency of items in each construct. Validity was assessed by exploratory factor analysis (EFA). The Bartlett test of sphericity and Kaiser-Meyer-Olkin (KMO) measure were applied to detect co-variation among the values of the research variables. The KMO measure was 0.87, and Bartlett test results reached significance, indicating that there were common factors and that the data were acceptable for factor analysis. Through principal component analysis, five factors were extracted. Items for perceived risk, ad attitude, brand attitude, and purchase intention were convergent and compliant with the expected constructs with total variance explained 70.77 percent. Because the questionnaire items were developed according to previous research, the developed scale was deemed to have theoretical validity.

H1a-d were tested using ANOVA to examine the main effects of blog types on advertising effectiveness. The homogeneity of the sample of each group was tested by Levene test. If the Levene test result was significant, the Welch method was applied to

Table I.

Sample distribution

	Celebrity blog		Expert blog		Typical consumer blog	
	E	S	E	S	E	S
High brand awareness	172	216	191	186	152	197
Low brand awareness	137	176	168	185	171	183

Note: E, experience products; S, search products

Table II.

Principal component analysis result, mean, standard deviation, and Cronbach's α

Expected construct	Items	1	2	3	4	Mean	SD	Cronbach's α
Purchase intension	PI2	0.86				3.83	1.18	0.89
	PI3	0.86						
	PI1	0.84						
	PI4	0.75						
Ad attitude	AD2		0.85			4.50	1.02	0.84
	AD3		0.83					
	AD1		0.66					
Brand attitude	BR2			0.83		4.47	1.03	0.87
	BR3			0.80				
	BR1			0.72				
Perceived risk	PR3				0.80	4.68	1.06	0.73
	PR2				0.78			
	PR1				0.76			

estimate the F -value. Finally, all groups passed the homogeneity test. Table III summarizes the results for the main effects test. The data indicated that perceived risk, advertising attitude, and purchase intention of consumers significantly varied according to blog type.

Means and standard deviations of advertising effectiveness were further compared for variables with significant differences. Scheffe *post hoc* comparison method was adopted. If the variances were not homogeneous, the Dunnett T3 comparison method was adopted. Table IV shows that the perceived risk of celebrity blogs was higher than that of other blogs and also significantly higher than that of expert blogs. The consumer survey results indicated that the highest brand attitude and purchase intention were for products recommended on expert blogs. Consumer advertising attitude about expert blogs was significantly better than attitude about celebrity blogs and typical consumer blogs; consumer intention to purchase products mentioned in expert blogs and typical consumer blogs was significantly higher than that for products mentioned in celebrity blogs. The main effects test result supported $H1a, b, d$.

The $H2$ and $H3$ were verified by two-way MANOVA. The interaction effects were tested using the simple main effect test. Table V shows the interaction effects between blog type and product type on advertising effectiveness. Clearly, the interaction between blog type and product type was significantly related to ad attitude. Thus, $H2b$ was supported.

The simple effect test was conducted to examine variables with a significant interaction effect. Table VI presents the means and standard deviations of the effects of product type and blog type on ad attitude for specified conditions. On typical consumer blogs, search products had a stronger effect than experience products did ($F = 8.68, p < 0.05$); for experience products, expert blogs were more effective than typical consumer products were ($F = 6.10, p < 0.05$); for search products, expert blogs were also more effective than celebrity blogs were ($F = 3.77, p < 0.05$). Figure 2 shows the comparison results.

Independent variable	Dependent variables	F value	p -value
Blog type	Perceived risk	7.14	0.001**
	Ad attitude	6.42	0.002**
	Brand attitude	2.34	0.097
	Purchase intention	12.76	< 0.001***

Notes: * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

Table III.
ANOVA of blog type

Dependent variables	Independent variable (blog type)	Mean	SD	<i>Post hoc</i> comparison
Perceived risk	Celebrity blog (BT1)	4.80	1.08	BT1 > BT2*
	Expert blog (BT2)	4.58	1.02	
	Typical consumer blog (BT3)	4.67	1.07	
Ad attitude	Celebrity blog (BT1)	4.42	1.05	BT2 > BT3*
	Expert blog (BT2)	4.60	0.97	
	Typical consumer blog (BT3)	4.46	1.03	
Purchase intention	Celebrity blog (BT1)	3.65	1.21	BT2 > BT3*
	Expert blog (BT2)	3.95	1.13	
	Typical consumer blog (BT3)	3.88	1.18	

Notes: * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

Table IV.
Analysis of
differences
in main effects

Table V.
Two-way MANOVA
of blog type and
product type

Independent variable	Dependent variables	Degree of freedom (df)	Mean sum of squares (MS)	F value	p-value
Blog type (A)	Perceived risk	1	1.07	0.96	0.326
	Ad attitude	1	2.91	2.81	0.094
	Brand attitude	1	27.26	26.11	< 0.001***
	Purchase intension	1	1.68	1.22	0.269
Product type (B)	Perceived risk	2	7.64	6.86	0.001**
	Ad attitude	2	6.79	6.57	0.001**
	Brand attitude	2	2.72	2.60	0.074
	Purchase intension	2	16.79	12.21	< 0.001***
(A) × (B)	Perceived risk	2	0.08	0.08	0.927
	Ad attitude	2	3.12	3.02	0.049*
	Brand attitude	2	1.39	1.33	0.265
	Purchase intension	2	1.49	1.08	0.340

Notes: * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

Table VI.
Effects of variables
(product type × blog
type) on ad attitude
in limited conditions

Dependent variables	Source of variance		Mean	SD
	Product type	Blog type		
Ad attitude	Experience products	Celebrity	4.42	1.00
		Expert	4.60	0.92
		Typical consumer	4.35	1.04
	Search products	Celebrity	4.41	1.10
		Expert	4.61	1.01
		Typical consumer	4.57	1.01

According to Table VII, the interaction effect of blog type and brand awareness on brand attitude was significant. Thus, $H3c$ was supported.

Variables with a significant interaction effect were examined by simple effect test. Table VIII shows the means and standard deviations of the effects of blog type and brand awareness on brand attitude in limited conditions. On expert blogs, products with high brand awareness had a stronger effect than those with low brand awareness ($F = 22.95, p < 0.001$); for products with low brand awareness, typical consumer blogs were more effective than celebrity blogs were ($F = 4.14, p < 0.05$). Figure 3 shows the comparison results.

5. Discussion and implications

This study demonstrates that perceived risk and purchase intention vary with blog type. Compared with celebrity blogs, expert blogs were characterized by lower perceived risk and higher purchase intention. Purchase intention for products mentioned in celebrity blogs was significantly lower than that for products mentioned in expert blogs and typical consumer blogs. Previous studies endorsers similarly revealed that experts and typical consumers have better communication effects; expert opinions are considered more reliable to consumers and can deepen their impressions about the product (Wang, 2005). In this study, celebrity blogs revealed no advertising effectiveness, probably because most of the articles on celebrity blogs are not

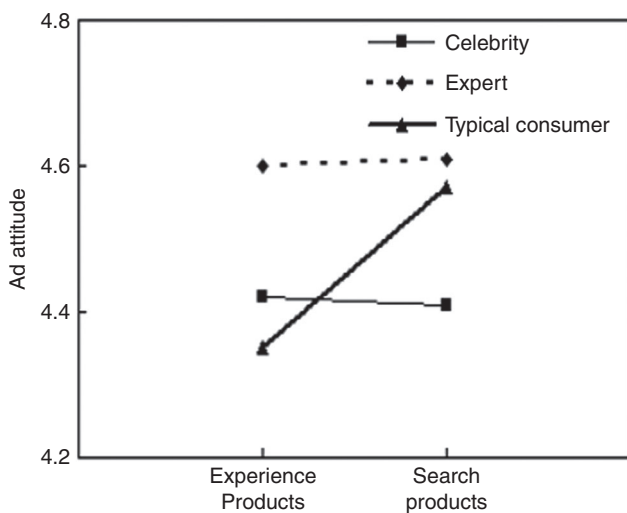


Figure 2.
Interaction effects
of blog type and
product type on
advertising attitude

Source of variance	Dependent Variables	Degree of freedom (df)	Mean sum of squares (MS)	F value	p-value
Blog type (A)	Perceived risk	2	8.49	7.63	< 0.001***
	Ad attitude	2	6.78	6.56	0.001**
	Brand attitude	2	3.13	3.01	0.049*
	Purchase intension	2	19.10	13.92	< 0.001***
Brand awareness (C)	Perceived risk	1	3.91	3.52	0.061
	Ad attitude	1	2.81	2.72	0.099
	Brand attitude	1	35.24	33.94	< 0.001***
	Purchase intension	1	10.34	7.53	0.006**
(A) × (C)	Perceived risk	2	0.63	0.57	0.567
	Ad attitude	2	2.51	2.43	0.088
	Brand attitude	2	3.23	3.11	0.045*
	Purchase intension	2	0.87	0.63	0.532

Notes: * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

Table VII.
Two-way MANOVA
of blog type and
brand awareness

Advertising effectiveness	Source of variance		Mean	SD
	Blog type	Brand awareness		
Brand attitude	Celebrity	High	4.55	1.05
		Low	4.22	1.02
	Expert	High	4.68	1.03
		Low	4.34	0.90
	Typical consumer	High	4.54	1.13
		Low	4.44	0.96

Table VIII.
Effects of variables
(blog type × brand
awareness) on brand
attitude in limited
conditions

composed by celebrities but by product providers. As a result, the non-commercial characteristics of blog articles are limited, which increases perceived risk. Consumers tend to discount the credibility of a blog if they perceive it as commercialized. Consumers are persuaded partly by the perceived expertise of the blogger in a certain area and partly by the description of user experience, particularly if the blog is not commercialized and is intended for sharing of personal experiences.

Additionally, blog type and product type had interaction effects on advertising attitude. Among the products recommended by typical consumer blogs, consumers had a better advertising attitude about search products than about experience products. This implies that consumers have more confidence in information about search products when viewing typical consumer blogs. For search products, expert blogs can form a better brand attitude than celebrity blogs can; for experience products, expert blogs can exhibit better advertising effectiveness than typical consumer blogs can. Wang (2005) mentioned that recommendations and appraisals by experts and typical consumers are considered more reliable by consumers and can form a better product attitude. In terms of experience products, consumers have more purchase intention if the products are endorsed by other consumers. The evidence in this study suggests that, for experience products, expert endorsement can lead to the highest advertising attitude, and consumer endorsement often confers the lowest ad attitude. Therefore, in terms of advertising effectiveness, consumer recommendations on blogs are most effective for search products and for experience products. This finding is inconsistent with previous research.

Finally, among products recommended in articles composed by experts, high brand awareness products can form a better brand attitude than low brand awareness products. For low brand awareness products, typical consumer blogs can form a better brand attitude than celebrity blogs can. Therefore, for lesser-known brands of products, consumer recommendations have a greater effect on brand attitude than expert or celebrity recommendations do. The inference is that when consumers are unable to infer the quality of a product by its brand and need to make the judgment by extrinsic cues, they pay attention to the characteristics of typical consumer blogs that share extrinsic cues, such as user experience, feedback or reliability of the product.

Management implications

The research findings can help enterprises to select appropriate blog types according to the type and brand awareness of their products and to use the blog as a medium

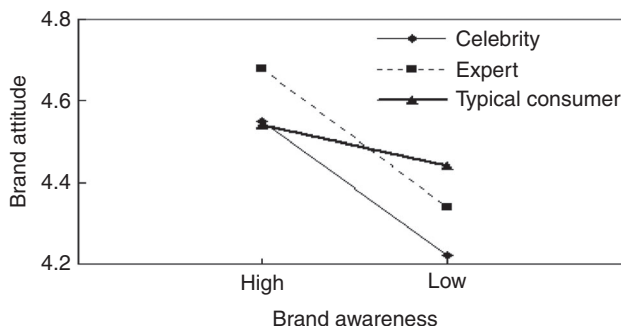


Figure 3.
Interaction effect
of blog type and
brand awareness
on brand attitude

for diffusing product information. Suggestions for planning blog marketing campaigns are as follows:

(1) *Select a blog type appropriate for the product.* To promote experience products on blogs, enterprises could first consider expert blogs because typical consumer blogs are less persuasive to consumers. For search products such as cell phones, cameras, computers, and furniture, expert endorsements on blogs are more effective than celebrity endorsements are. Therefore, enterprises should search for experts on the internet, provide trial programs, and give rewards to attract well-known experts to write about their products and enhance the advertising effectiveness of the blog.

(2) *Select an appropriate blog type according to brand awareness.* For products with low brand awareness, typical consumer blogs are the best endorsers because they can form the highest brand attitude. Enterprises can provide frequent product trial programs, rewards to writers of promotion articles, or other mechanisms such as lotteries, gift giveaways, and essay contests. They can also use the power of the internet to promote related activities, enhance the number and quality of typical consumer posts of opinions about their products, and increase opportunities for internet users to access these posts. Such measures can effectively enhance the advertising effectiveness of their blogs.

(3) *Select blogs without considering product attribute and brand awareness.* Of the three blog types, expert blogs have the strongest word-of-mouth effect followed by typical consumer blogs. Because expert blogs are effective for advertising, enterprises can provide incentives such as free trials and rewards for writers of product-related essays to attract experts in related fields to write articles about their products. Bloggers can also be encouraged to make objective comments about their products to maintain consumer trust.

6. Conclusions and future research directions

Our study proposed a framework which can help enterprises to evaluate the type and brand awareness of a product to be promoted and to select the blog type that maximizes advertising effectiveness (perceived risk, ad attitude, brand attitude, and purchase intention) in diffusing product information.

Modern consumers are better informed than ever. Diffusing information via conventional advertising is insufficient for differentiating a product from its competitors. Consumers today are not susceptible to one-way advertising. Besides, consumers have more autonomy and product options, so the advertising effectiveness of most advertisements is unsatisfactory. Although many enterprises often hire well-known celebrities to endorse their products at tremendous cost, celebrity endorsements on blogs are apparently unpersuasive to consumers. Enterprises are suggested to attract experts or typical consumers who have personally tried or used their products to write vivid and persuasive articles and to attach related photos to elaborate on their practical experiences. These articles may then become the best source of product information on the internet and exhibit the highest effect of endorsement. Besides, enterprises can also collect Uniform Resource Locators (URLs) to articles published on other blogs and integrate them into their official sites or blogs. These articles are the best testimonies of product users. Recommending a product from a third-party perspective not only ensures advertising effectiveness, it also shortens the distance between enterprises and consumers and enables closer interactions between consumers and the product.

The limitations of this study related to the price factor was not incorporated into the experimental model, and shopping channels were not limited. There might be

a gap between the prices of the experimental products and the average expense of online shoppers. Experimental products, including cell phones and tour products, are high-involvement products. Future researchers are suggested to investigate the advertising effectiveness of blogs for other industries. Because consumers may access blog information via different channels, future researchers can also compare advertising effectiveness between blogs accessed via different channels. The Bickart and Schindler (2001) study suggests that commercial and non-commercial information available on the internet have similar effects on the knowledge, ideas, and purchase intentions of consumers. Therefore, we did not discuss the effect of endorsement by high-ranking executives or the effect of commercial uses of blogs. However, if the time, space or internet user behaviors are different, further study is warranted.

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Further reading

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