

[Original Article]

Effect of information direction and order of product review posts on consumer responses: The case of cosmetics power bloggers

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Abstract

This study explores the effect of information direction and order of cosmetics power bloggers on consumer responses. A total of 488 undergraduate students participated in experiments with mock-up stimuli of sunscreen product reviews by power bloggers. The study was conducted with four stimuli of product review posts (i.e., positive reviews only, positive-negative reviews in order, negative-positive reviews in order, negative reviews only) of the power bloggers. The results showed a significant difference in consumer responses according to information direction and order of product reviews of the power bloggers. Specifically, negative reviews were considered more objective and more useful than positive reviews were. However, positivity of reviews is crucial in generating more positive attitudes toward products, greater purchase intention, and greater word-of-mouth intention. In regard to information order, the negative-positive reviews generated more positive attitudes toward the product and greater purchase intention than did the positive-negative reviews, emphasizing the importance of ending product reviews with positive information so as to create positive responses. Referring to the findings, power bloggers and marketers using bloggers as a promotional tool would benefit by carefully designing information content in consideration of an appropriate direction and order of information to better fit their purpose.

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I. Introduction

Power bloggers have been considered a crucial word-of-mouth (WOM) channel impacting consumer attitudes and purchase intention (Li, 2017). ‘Blog’ is a portmanteau combining ‘web’ and ‘log’, and ‘blogger’ is an operator of a blog that allows people to

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read and respond to the personal opinions and information posted on the internet site (“Blog”, n.d.). Power bloggers are popular bloggers with a high number of blog visitors. Portal sites release figures on hundreds of power bloggers each year based on the amount and content of posts, as well as on the number of visitors and review posts (“Power blogger”, n.d.). These power bloggers have been exercising their influence as opinion leaders through reviews of products and services in the market (Choi, 2014).

Many power bloggers actively post information and opinions on fashion, electronics, cosmetics, travel, and dining products and services. According to a survey conducted by Research International (Baek, 2009), consumers use power blog information more actively when purchasing cosmetic products than when purchasing apparel products. In another survey, ‘2017 Beauty Trend Reports’ (Jun, 2017), power bloggers were selected as the most powerful information source for cosmetic products.

Influence of power bloggers on the process of information search and product evaluation has been widely acknowledged by consumers (Choi, 2014; Li, 2017), but there has been insufficient research and understanding of consumer responses toward different structures of information in the review posts of power bloggers. Although bloggers are likely to provide both positive and negative information, there have only been a few studies focusing on the direction and order of information. Prior research (Ryu, 2012; Yang & Cho, 2000; Yoo, Ahn, & Park, 2011) indicated that the direction and order of information affected attitude, purchase intention, and WOM intention. There has been research focusing on product information and post-purchase reviews of online shopping malls (Kim & Kim, 2010; Ryu, 2012; Suh & Lee, 2013), but only a few studies (e.g., Ahn, 2013; Li, 2017) investigated the effect of information structure in power blogs. The purpose of this study is to explore the effect of information direction and order on consumer responses (i.e., information credibility, attitude toward the blogger, attitude toward the product, purchase intention, and WOM intention). This study results may contribute to providing basic knowledge to develop effective promotion strategies in relation to power bloggers.

II. Literature Review

1. Cosmetics power bloggers

‘Power blogger’ is defined as “an internet blog operator consistently maintaining the user compliance rate with a high number of visitors and review posts.” (“Power blogger”, n.d.) Power bloggers, as opinion leaders, influence brand and product evaluations, purchase intention, and WOM behaviors (Ahn, 2013; Han, 2009). In Korea, portal sites such as Naver and Daum have an authorization system of power bloggers, qualitatively and quantitatively evaluating the activation and popularity of bloggers as well as the popularity of blog posts (Choi, 2014; Hong, Lee, Oh, Lim & Roh, 2011).

Cosmetics power bloggers specialize in cosmetic product reviews. According to the ‘2017 Beauty Trend Report’ conducted by Open Survey (Jun, 2017), the most significant influencer on purchase decision-making of cosmetics is the post-purchase product review in blogs, indicative of the crucial power of bloggers’ review posts. In another survey conducted with females in their 20s and 30s (Choi, 2015), the most influential SNS (social network service) content in generating interest in cosmetic products were comments on products made by power bloggers or Instagram stars (51.1%). As stated earlier, the influence of power bloggers on purchase decision-making of cosmetic products has been known; however, there have only been few studies focusing on the effect of review posts of power bloggers on consumer responses.

2. Effect of Information Direction and Order on Consumer Responses

2.1. Information direction

Information direction (positive/negative) is an important factor affecting consumer responses (Block & Keller, 1995). Several researchers (Lee & Lee, 2005; Ryu, Chin, & Han, 2008; Yoo et al., 2011) have shown that positive messages were more effective than negative messages in enhancing attitude toward advertisements, attitude toward brands, purchase intention, and WOM intention. On the other hand, there were researchers highlighting the effect of negative information. Several researchers found that negative WOM messages had stronger effects on consumers than positive messages (Jeon & Park, 2003), and negative messages more strongly affected WOM intention than did positive messages (Kim, 2006; Kim, Ahn, & Kim, 2006).

As pointed out, there are opposite results for information direction, but it is clear that both positive and negative information are critical in affecting consumer responses. In the literature, the stronger effect of negative information over positive information has been more widely acknowledged, noting that negative information is considered more important than positive information based on impression formation theory (Klein, 1996), and has more diagnostic and informational values than positive information (Ahluwalia, Burnkrant, & Unnava, 2000). Li (2017) found that consumers tended to have more positive attitudes toward the brand and greater purchase intention when having positive and negative messages together in power bloggers' review posts. The inconsistency across prior findings should be further explored in more diverse settings.

2.2. Information order

'Order effect' refers to the change in consumer perceptions as a result of changes in information order, and includes two other psychological tendencies: the 'primacy effect' and the 'recency effect' (Fan, 2011; Haugtvedt & Wegener, 1994). The primacy effect is the tendency in which information provided in advance becomes the reference point in consumer decision-making, so people tend to make a decision based on messages provided earlier than later (Hogarth & Einhorn, 1992). Conversely, the recency effect is the tendency in which information provided later is more strongly prevalent in persuading people when carefully considering all the information given (Stewart, 1965).

There has been research supporting both the primacy effect and the recency effect. Zhang (2014) found that advertisements with positive-negative information, in that order, are more effective in enhancing purchase intention than advertisements with negative-positive information, in that order (Zhang, 2014), exhibiting the primacy effect. Hastak and Park (1990) also supported the primacy effect by insisting that placing positive messages in the beginning of an advertisement is superior in persuading people since negative messages presented in the beginning will solidify a negative impression of advertised products.

There has also been research supporting the opposite recency effect. Sternthal and Craig (1982) insisted that negative information should be placed earlier than positive information to improve the persuasion capacity of advertisements by stamping the more recent message in subjects' memory. Fan (2011) also found that consumers showed higher purchase intention when having sales persons' messages that are negative-positive information in order rather than positive-negative information in order. Inconsistency across prior studies calls for further research on this issue.

3. Relationships of Research Variables

3.1. Effect of Information Direction and Order of the Power Bloggers' Reviews on Consumer Responses

Compared to other online posts in online shopping malls or product websites, power bloggers' posts focus mostly on personal opinions with positive and negative information. Since information posted in blogs is widely understood to be subjective personal opinion, it is not necessarily objective. Blog users make their own judgments on whether a blog is trustworthy or not. Regardless of the subjectivity of blog information, blogs are considered a strong medium of digital WOM (Vrana & Zafiroopoulos, 2010). To more effectively use blogs as a marketing tool, it is valuable to understand whether or not the direction and order of information provided by power bloggers affects consumer responses.

Among the dependent variables related to the acceptance of WOM information, there are information credibility, attitude, purchase intention, and WOM intention (Lee et al., 2011). This study explores the effect of information direction and order provided by a cosmetics power blogger on information credibility, attitude toward the blogger, attitude toward the product, purchase intention, and WOM intention.

Information credibility' is the propensity to accept information based on trust of information (Morgan & Hunt, 1994). 'Attitude toward the blogger' refers to the propensity of the consumer to consistently like or dislike a specific brand. 'Attitude toward the product' is defined as the propensity of the consumer to consistently like or dislike a specific product (Ajzen, 1991). 'Purchase intention' is defined as the willingness of the consumer to purchase the product (Ajzen, 1991). 'Word-of-mouth intention' (WOM intention) refers to the willingness of the consumer to be involved with word-of-mouth activities by making recommendations or positive comments about something (Ryu, 2012). These four dependent variables were selected to explore a variety of consumers' perceptions and responses on reviews presented by power bloggers. The research problem is as follows:

Research question 1. Explore the effect of the direction and order of information provided by a cosmetics power blogger on consumer responses.

3.2. Effect of information credibility on attitude toward the blogger and the product

Kim and Lee (2013) and Martin and Leug (2013) have shown that expertise and trustfulness are major factors of information credibility, while Wathen and Burkell (2002) have suggested that expertise, trustfulness, consistency, and familiarity are main factors of information credibility. Lim and Chung (2011) have found that people have more positive attitudes toward a brand as they perceive more information credibility. Consistently, Sternthal, Dholakia, and Leavitt (1978) have also found that people have more positive attitudes toward the product as they perceive more information credibility.

'Information usefulness' is the degree to which consumers believe that the information would be useful in decision-making (Kim & Chung, 2007). Chun (2005) reported that perception on usefulness of other consumers' comments posted in online shopping mall forums increases the positive attitudes toward information acceptance. Li (2017) also confirmed that information usefulness of power bloggers increases positive attitudes toward and purchase intention of the brand. 'Objectiveness of information' refers to the fairness of information (Hur & Ku, 2010). Park and Chung (2006) found that objective information affected attitudes toward the product more significantly than did

subjective information. Based on the prior studies, objectiveness and usefulness of information provided by power bloggers may enhance information trustworthiness of the bloggers' content and the bloggers themselves. Therefore, objectiveness and usefulness of information may contribute to forming more positive attitudes toward the blogger.

'Expertise of information' is perceived when the information is provided by experts. Li (2017) identified that the expertise of the blogger is an important factor contributing to the information credibility of the blogger. Ahn (2013) indicated that specialty of information of the blogger positively affected attitude toward the product because consumers may believe in the information with greater confidence, resulting in the forming of a favorable attitude toward the product.

3.3. Relationships among attitude toward the blogger, attitude toward the product, purchase intention, and word-of-mouth intention

Several researchers (Kim, 2005; Yun, Ahn, & Lee, 2012) have revealed that attitude toward bloggers affected attitude toward the products that ultimately influence purchase intention. Attitude is a positive or negative feeling toward an object or a behavior, and attitude is an important predictor of behavioral intention (Ajzen, 1991). The effect of attitude toward the product on purchase intention and WOM intention has been corroborated in diverse studies (Kim & Han, 2011; Kim, Pyo, & Han, 2011; Yong, Chung, & Han, 2011). Specifically, Kim et al. (2011) found that product reviews of power bloggers affected attitude toward the product that ultimately affected purchase intention and WOM intention. Consumers are likely to build WOM intention based on purchase intention and purchase experience (Dichter, 1966). Therefore, consumers who exhibit greater purchase intention may also have greater intention to be involved with WOM behaviors based on their positive evaluations of and feelings toward the product.

Research question 2. Explore the causal relationships among consumer response variables when using information provided by a cosmetics power blogger.

H1. Usefulness of information provided by a cosmetics power blogger positively affects attitude toward the blogger.

H2. Objectiveness of information provided by a cosmetics power blogger positively affects attitude toward the blogger.

H3. Perception of expertise of information provided by a cosmetics power blogger positively affects attitude toward the product.

H4. Attitude toward the blogger positively affects attitude toward the product.

H5. Attitude toward the product provided by a cosmetics power blogger positively affects attitude toward purchase intention.

H6. Attitude toward the product provided by a cosmetics power blogger positively affects attitude toward word-of-mouth intention.

H7. Purchase intention of the product provided by a cosmetics power blogger positively affects word-of-mouth intention.

III. Methods

1. Stimuli development

Stimuli of power bloggers' product reviews were developed for the study. A power blogger page on Naver that has the largest number of users in Korea was developed. Cosmetics were selected as a product category since the most important information source referred to by cosmetics consumers is power bloggers (Choi, 2015; DMC media, 2010). Among a wide range of products, sunscreen products were selected as the review product since they are widely used by both genders.

In the pretest, 18 bloggers with review posts about sunscreen products were selected out of the top 20 bloggers in terms of the number of total blog visitors. Among many review posts of sunscreen products, a review post with the largest number of comments made by viewers was selected to analyze the content of product review posts. Through the examination of review posts of sunscreen products, 20 product attributes were generated. Four kinds of stimulus were developed as review posts with (1) only positive reviews, (2) positive-negative reviews in order, (3) negative-positive reviews in order, and (4) only negative reviews.

Among those 20 attributes, three attributes describing basic information (skin type, manufacturing date, and expiration date) were commonly presented in the beginning of all the stimuli. The remaining 17 attributes were divided into Group I (ingredients, irritant, fragrance, SPF, multi-purpose, volume, and price), and Group II (texture, spread, absorbance, slip out, oiliness, stickiness, moisture, resistance, white turbidity, and skin correction). Positive and negative review comments were developed for the 17 attributes and were allocated to four types of stimulus as presented in <Table 1>.

Images of power blogger pages were developed with a power blogger authorization mark, the number of daily visitors and total visitors, and the number of posts and comments, as similar to the real power blogger web pages as possible. At the center of the page a product review that is one of the four types of messages (viz., only positive reviews, positive-negative reviews in order, negative-positive reviews in order, and only negative reviews) was placed. Sunscreen product photos that had no brand name were presented in a white package to reduce the effect of a brand name and/or its package design (Figure 1)

2. Measurement and Analysis Methods

In questionnaires, question items on information credibility (Ryu, 2012), attitude toward the blogger (Han, 2009), attitude toward the product (Choi, 2014), purchase intention (Lee, 2013), and WOM intention (Ryu, 2012) were included. In addition, questions for stimulus manipulation checks were included, referring to items of information direction and order perception (Ryu, 2012). Questions asking about informant characteristics were added, referring to Ahn (2013). All questions could be answered on 6-point Likert scales (from 'very unlikely (1)' to 'very likely (6)'). Data were analyzed through descriptive analysis, exploratory and confirmatory factor analysis, ANOVA, LSD test, MANOVA, and structural equation modeling using AMOS.

Table 1. Sunscreen product review as stimulus

Type	Product attributes	Sunscreen product review
Basic information	Skin type / Manufacturing date / Expiration date	It is a sunscreen product for all types of skin. It was manufactured in March 2015 and its expiration date is 12 months after opening.
Positive review (PR)	(1) Ingredients / Irritant / Fragrance / SPF / Multi-purpose / Volume / Price	It does not include artificial fragrances, artificial colors, or harmful UV ingredients. It successfully passed dermatological tests and it is hypoallergenic for sensitive skin types. Its fragrance is mild so it can be used without hesitation. It is easily washable so you don't have to use a specific cleanser. It is a high UV protection product with SPF 50/PA+++ so it can be used both indoors and outdoors. It is outstanding for blocking UVA and UVB. Its volume is 50ml and is sold at special price for members. It has considerable volume when compared with the price, making it last for a long period of time.
Positive review (PR)	(2) Texture / Spread / Absorbance / Slip out / Oiliness / Stickiness / Moisture / Resistance / White turbidity / Skin correction	It has a watery texture and spreads softly like lotion. It absorbs quickly so it adheres lightly to the skin. In the next step, it does not slip out when you apply other cosmetics over it. It is an oil-free product so it is not sticky, and it is not glossy hours after applying it to the skin. It has moisture so it feels moist and it is resistant to sweat and water. There is no white turbidity and it makes skin tones lighter due to skin correcting effects.
Negative review (NR)	(1) Ingredients / Irritant / Fragrance / SPF / Multi-purpose / Volume / Price	It partially includes artificial fragrances, artificial colors, and harmful UV ingredients so it can be a cause of concern for allergic or sensitive skin types. Its fragrance is strong and people who are sensitive to strong fragrances may be hesitant to use it. It is bothersome since you must wash yourself with a specific cleanser for sunscreen creams. It is a somewhat low UV protection product for outdoors with SPF 30/PA+++ . It does not successfully block UVA and UVB. Its volume is 30 ml and is sold at special price for members. It has little volume when compared with the price, making it only last for a short period of time.
Negative review (NR)	(2) Texture / Spread / Absorbance / Slip out / Oiliness / Stickiness / Moisture / Resistance / White turbidity / Skin correction	It has a dry texture and doesn't spread easily or evenly. It does not absorb quickly so it feels heavy and stuffy and adheres less to the skin. In the next step, it can slip out when you apply other cosmetics over it. It is oily and sticky so it becomes glossy hours after applying it to the skin. It has little moisture so it feels dry and it is only slightly resistant to sweat and water. There is white turbidity and it is hard to make skin tones lighter due to the lack of skin correcting effects.

Stimuli 1) Only positive reviews: Basic information + PR(1) + PR(2)

Stimuli 2) Positive-negative reviews in order: Basic information + PR(1) + NR(2)

Stimuli 3) Negative-positive reviews in order: Basic information + NR(1) + PR(2)

Stimuli 4) Only negative reviews: Basic information + NR(1) + NR(2)



Figure 1. Example of stimulus image

3. Informant Characteristics

The study was conducted with male and female undergraduate students since the majority of blog information consumers are in their 20s (Korea Internet & Security Agency, 2012). Participants were recruited from university courses, provided extra credit for their courses through their participation, and were randomly allocated to different stimuli. While viewing the printed stimuli of power blogger web pages, participants were asked to assume that those stimuli are the real power blogger web pages and to fill out the questionnaire. A total of 488 questionnaires were submitted for analysis.

Males constituted 24% of participants (N=117) and females 76% (N=371). The mean age of participants was 21.37. Monthly household income varied from ‘less than 1 million won’ (N=134; 27.5%), ‘1 to 2 million won’ (N=41; 8.4%), ‘2 to 3 million won’ (N=74; 15.2%), ‘3 to 4 million won’ (N=83; 17.0%) to ‘4 million won and over’ (N=156; 32.0%’. Monthly expenditure on cosmetics varied from ‘less than 100,000 won’ (N=377; 77.3%), ‘100,000 to 200,000 won’ (N=87; 17.8%) to ‘200,000 to 300,000 won’ (N=24; 4.9%). 84.6% of participants (N=413) indicated that they had experienced referring to product review posts of power bloggers. Product categories for power bloggers’ reviews that participants had previously referred to included cosmetics (N=330; 67.6%), fashion (N=219; 44.8%), food (N=106; 21.7%), cell phones (N=81; 16.5%), lifestyle products (N=77; 15.7%), and electronics (N=68; 13.9%). The most often used power blogger site was Naver (N=477; 97.7%), followed by Daum (N=29; 5.9%), and Tistory (N=8; 1.6%). 69.9% of participants (N=341) responded that they use sunscreen products, showing that the majority of participants are sunscreen product consumers. Means of the importance in making purchase decisions for sunscreen products were assessed for 20 product attributes. Means of the importance of each product attribute ranged between

4.15 and 5.36 on 6-point Likert scales, confirming that all those attributes were important concerns in the purchase of sunscreen products.

4. Stimulus Manipulation Checks

Differences in the perception of stimuli among groups were checked using ANOVA and LSD tests (Table 2). The results confirm that all groups appropriately perceived the given stimuli in terms of whether the stimuli included positive and/or negative reviews, i.e. participants' perceptions of the stimuli/samples tracked well with the intended valences of the reviews.

Table 2. Group differences according to the information direction and order

Information direction and order	Group	Stimuli 1 (n=129)	Stimuli 2 (n=130)	Stimuli 3 (n=125)	Stimuli 4 (n=113)	F-value (p-value)
		M(SD)	M(SD)	M(SD)	M(SD)	
Positive information is included		4.95(.80)a	3.05(1.23)c	3.34(1.55)b	1.54(.70)d	228.06***(.000)
Negative information is included		1.83(.79)d	3.78(1.17)b	3.48(1.52)c	5.20(.72)a	236.06***(.000)
Both positive and negative information are included		1.44(.65)b	5.21(.76)a	5.21(.71)a	1.58(.64)b	1154.78***(.000)
Positive-negative reviews in order		1.70(.75)b	5.12(.74)a	1.66(.67)bc	1.57(.58)c	807.01***(.000)
Negative-positive reviews in order		1.67(.74)bc	1.77(.71)b	5.19(.70)a	1.59(.58)c	811.20***(.000)
Positive reviews only		5.47(.69)a	1.68(.70)b	1.69(.70)b	1.29(.46)c	1108.47***(.000)
Negative reviews only		1.37(.61)c	1.67(.68)b	1.72(.68)b	5.46(.67)a	1006.81***(.000)

abc: results of LSD tests; * $p < .05$, ** $p < .01$, *** $p < .001$

IV. Results

1. Exploratory and Confirmatory Factor Analysis

Exploratory factor analysis was conducted and summarized in <Table 3>. Information credibility items converged to three factors: usefulness, objectiveness, and expertise. Eigen values varied from 2.78 to 3.16 while Cronbach's alphas were above .82 for all three factors. A single factor was generated from attitude toward the blogger, attitude toward the product, and WOM intention (Table 4). Eigen values and factor loadings of these factors exceeded the criteria for good internal validity. Cronbach's alphas for these three factors were between .77 and .89.

In the confirmatory factor analysis results, the Q value (CMIN/df) is 1.62, below a 3 which is considered the criteria for a good fit (Hair, Black, Babin, & Anderson, 2010). Other fit indices (CFI=.98, NFI=.96, RFI=.95, IFI=.99, TLI=.98) are above .90 showing a good fit to the model. All path coefficients of observed variables to endogenous variables are significant, indicating CR above 2 (Byrne, 2016). In examination of AVE and CR of endogenous variables, all values met the criteria (AVE >.50; CR >.70), indicating good convergence validity and discriminant validity (Hair et al., 2010).

Table 3. Exploratory factor analysis results of information credibility

Factor		Item	Factor loading	Eigen value	Variance (%)	Cumulative variance(%)	Cronbach's alpha
Information credibility	Usefulness	I can get accurate information that I wanted from this review.	.75	3.16	24.29	24.29	.89
		This review will be helpful for purchasing products.	.82				
		I understood this product better through this review.	.85				
		My knowledge of this product improved from this review.	.80				
	Objectiveness	Product information in this review is objective.	.65	3.13	24.05	48.34	.82
		Product information in this review is reliable.	.74				
		I trust the product information in this review.	.74				
		This review is for the purpose of promoting.	.65				
		This review is based on facts.	.54				
		I feel there is no lie in this review.	.72				
	Expertise	This review delivers specialized information on the product.	.85	2.78	21.36	69.71	.88
		This review is based on rich knowledge of the product.	.85				
This review includes specialized information on the product.		.84					

Table 4. Exploratory factor analysis of consumer response variables

Factor	Item	Factor loading	Eigen value	Variance (%)	Cronbach's alpha
Attitude toward the blogger	I will scrap this review posting.	.67	3.88	64.71	.89
	I want to add this blog to "my favorite sites" or "my neighbor sites".	.80			
	I like this blogger.	.91			
	This blogger is favorable.	.90			
	This blog is useful.	.82			
	This blogger is positive.	.69			
Attitude toward the product	I found I wanted to know more about this product.	.69	3.90	77.92	.92
	I like this product.	.91			

Factor	Item	Factor loading	Eigen value	Variance (%)	Cronbach's alpha
	This product is favorable.	.95			
	This product is useful.	.93			
	This product is positive.	.98			
Word-of-mouth intention	I will tell others about this product within 1 year.	.90	1.63	81.59	.77
	I will recommend this product to others within 1 year.	.90			

2. Exploration of Research Problem and Test of Hypotheses

2.1. Differences in information direction and order

ANOVA was conducted to explore differences in consumer responses when varying the direction and order of information provided by a power blogger (Table 5). Four groups divided by the information characteristics differed in information credibility according to Pillai's Trace F . In detail, usefulness and objectiveness were more strongly perceived in the review posts with only negative comments than those with positive and negative comments together, as well as those with only positive comments. Usefulness and objectiveness of information were perceived less in review posts with only positive comments. It is consistent with Suh and Lee (2013) in which higher information credibility was shown to correlate more with negative information than positive information. There was no difference across groups in perceptions on information expertise.

Four groups differed in terms of attitude toward the product, purchase intention, and WOM intention. Participants showed the most positive attitude toward the product when having posts with only positive comments, while they showed the least positive attitude toward the product when having posts with only negative comments. Posts with both positive and negative comments were perceived as more positive than posts with only negative comments, and as less positive than posts with only positive comments, generating a particular attitude toward the product, purchase intention, and WOM intention. These results are consistent with the literature supporting the crucial effect of positive information (Ryu et al., 2008; Yoo et al., 2011).

In addition, there was evidence of the recency effect, presenting more favorable responses toward posts with negative-positive reviews than posts with positive-negative reviews. These results suggest that consumers put more weight on information given later than earlier when positive and negative information are concomitantly provided in a message, supporting prior research (Fan, 2011; Sternthal & Craig, 1982). There was no group difference in attitude toward the blogger. This may be due to the low engagement with the blogger during the brief study (Ahn, 2013) and low trust in and interactions with the blogger (Choi, 2014).

Table 5. Differences in consumer responses according to information direction and order

Consumer response		Category	Positive reviews only (n=120)	Positive-negative reviews in order (n=130)	Negative-positive reviews in order (n=125)	Negative reviews only (n=113)	F-value (p-value)	Pillai's Trace F (p-value)
			Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)		
Information credibility	Usefulness	3.59 (.99)c	4.01 (.95)ab	3.98 (1.10)b	4.10 (.94)a	6.19*** (.000)	8.47*** (.000)	
	Objectiveness	3.17 (.86)c	3.53 (.90)b	3.58 (.86)b	3.84 (.82)a	15.85*** (.000)		
	Expertise	3.73 (1.01)	3.49 (.98)	3.62 (1.00)	3.64 (1.08)	1.12 (.341)		
Attitude toward the blogger		2.75 (.96)	2.86 (.98)	2.92 (.98)	2.99 (.89)	1.26 (.288)	-	
Attitude toward the product		3.45 (1.03)a	2.80 (.91)c	3.13 (.96)b	2.35 (.79)d	30.03*** (.000)	-	
Purchase intention		2.83 (1.22)a	2.07 (1.03)c	2.39 (1.09)b	1.81 (.90)c	20.03*** (.000)	-	
Word-of-mouth intention		2.90 (1.22)a	2.42 (1.07)bc	2.48 (1.98)b	2.35 (.97)c	6.15*** (.000)	-	

abc: results of LSD tests; * $p < .05$, ** $p < .01$, *** $p < .001$

2.2. Causal model test

Results of structural equation model tests are presented in <Table 6>. Model fit is good in terms of good-fit indices (Q(CMIN/df)=1.68, CFI=.98, NFI=.96, RFI=.95, IFI=.98, TLI=.98, AGFI=.92, GFI=.94, RMSEA=.04) (Hair et al., 2010). All causal paths were significant and CR for each coefficient exceeded 2 (Byrne, 2016), confirming the positive effect of information credibility (i.e., usefulness, objectiveness) on attitude toward the blogger, the positive effect of information credibility (i.e., expertise) on attitude toward the product, the positive effect of attitude toward the blogger on attitude toward the product, the positive effect of attitude toward the product on purchase intention, the positive effect of attitude toward the product on WOM intention, and the positive effect of purchase intention on WOM intention. As consumers perceive usefulness and objectiveness of information more, they tend to have more positive attitudes toward the blogger. As consumers perceive expertise of information more, they tend to have more positive attitudes toward the product. In addition, consumers having more positive attitudes toward the blogger tend to have more positive attitudes toward the product review posts provided by the blogger. As consumers have more positive attitudes toward the product, they tend to have higher purchase intention and WOM intention. Consumers with more purchase intention may have more WOM intention. These results support H1 through H7.

Table 6. Causal model test

Path	Std. Coefficient	Std. Error	C.R. (<i>p-value</i>)	Fit
Information credibility (Usefulness) →Attitude toward the blogger	.55	.04	8.08*** (.000)	$\chi^2=440.65$ $df=263$ CMIN/df=1.68 GFI=.94 AGFI=.92 NFI=.96 RFI=.95 IFI=.98 TLI=.98 CFI=.98 RMR=.66 RMSEA=.04
Information credibility (Objectiveness) →Attitude toward the blogger	.20	.03	3.83*** (.000)	
Information credibility (Expertise) →Attitude toward the product	.17	.03	3.35*** (.000)	
Attitude toward the blogger →Attitude toward the product	.33	.08	5.58*** (.000)	
Attitude toward the product →Purchase intention	.71	.07	14.46*** (.000)	
Attitude toward the product →Word-of-mouth intention	.24	.06	5.97*** (.000)	
Purchase intention →Word-of-mouth intention	.62	.04	16.98*** (.000)	

* $p < .05$, ** $p < .01$, *** $p < .001$

V. Discussion

This study explored consumer responses toward product review posts of cosmetics power bloggers. Important results and implications include the following. First, cosmetics posts with only negative reviews were perceived as more useful and objective than those with only positive reviews. Power bloggers may want to provide negative aspects of products in order to enhance information credibility of the blogger. Consumers may perceive that negative information is more valuable than positive information to refer to when evaluating the quality of the product. Marketers using power bloggers as WOM promotion channels should not necessarily be hesitant to provide negative information in addition to positive information in order to build consumer trust in the promotional message, recognizing that information leaning too much toward positivity of product attributes can weaken consumers' trust in the information. The usefulness and objectiveness of information influences the fostering of positive attitudes toward the blogger.

Second, positive information is essential to generate positive responses of consumers. Emphasizing the positivity of product attributes is crucial in building favorable attitudes toward the product. Therefore, power bloggers and marketers may want to develop marketing messages including positive aspects of a wide range of product attributes.

Third, the recency effect was confirmed based on the results in which product review posts constructed as negative-positive comments, in that order, generated more positive attitudes toward the product and greater purchase intention than those with positive-negative comments, in that order. This result supports that the negative information at the beginning of a review, no matter how negative, has not much effect on consumers' perceptions of the product, as long as it is followed by positive information.

Based on these findings, power bloggers and marketers may want to place more positive information later in the review in order to leave a positive impression on consumers' minds, while still keeping the more negative aspects of

the product earlier in the reviews and promotional messages. The importance of negative-positive information could also be applied to the development of other online advertisements and product descriptions in online shopping malls. In this study, the recency effect was supported while the primacy effect was not supported. This may have resulted from the use of the same basic (neither positive nor negative) information of the product in the beginning of all stimuli. This may lessen the primacy effect because the positive or negative information is not presented at the very beginning. In future studies, sequencing of positive and negative reviews should be carefully managed to obtain more valid results.

Fourth, in causal relationships among consumer response variables, the following conclusions can be made. Consumers with more positive attitudes toward the blogger tend to have more positive attitudes toward the product. Also, consumers with more positive attitudes toward the product tend to have greater purchase intention and greater WOM intention. Consumers with greater purchase intention tend to have greater WOM intention. These relationships indicate that the positive attitude toward the blogger and the product causes other positive responses of consumers, indicating the interconnectedness of these consumer response variables.

Limitations of the study and suggestions for future studies are as follows. First, the studies were conducted with only university students. In future studies, a more diverse range of age groups should be included to increase the applicability of the findings. Middle-aged and elderly consumers would be interesting groups to investigate for this research topic. In this present study, only a printed mock-up web page of a power blogger was used as a stimulus. Due to the visual differences between the printed image and the real web page of review posts, participants may have had a lower degree of engagement with the stimulus. The use of real web page stimuli may enhance feelings of presence and authenticity for future studies. The study findings could also be applied to diverse studies focusing on online advertisements and online product descriptions. In addition, this study dealt with only a single cosmetics product, viz. a sunscreen product. Evidence generated from studies with diverse products can be of great value in reinforcing the findings.

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