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Abstract: E-WOM is considered to be an important factor affecting consumers' purchasing decisions. Now many scholars focus on the specific presentation of e-WOM to study consumer behavior, and the research on the influence mechanism of the form-based characteristics of e-WOM information on consumers is relatively lacking. Based on clue utilization theory and the perspective of consumer psychology processing, we explores the impact of visual cues of e-WOM on consumer perception and purchase intention. The experimental results show that the visual cues of e-WOM promote the mental imagery of consumers, and then have a significant impact on their perceptual diagnosis and purchase intention. Finally, the corresponding marketing management inspiration is proposed.

Keywords: e-WOM, visual cues, mental imagery, perceived diagnosticity

1.   INTRODUCTION

With the development of the Internet, the speed and traffic of uploading mobile short videos are comparable to pictures. The development of mobile short videos has enabled the audience to enter the "second reading era". The short video production in UGC mode is convenient and fast, and can satisfy the authenticity and individual needs of consumers. E-WOM has always been considered an important factor affecting product sales. In addition to the product information displayed by the merchants, the study found more than half of the respondents believe that e-WOM has an important influence on purchasing behavior. When product information is limited, consumers are more likely to refer to product reviews. Scholars have verified that marketers need to spend a lot of time and energy to manage e-WOM in order to meet consumers' expectations of products.

The presentation of e-WOM has undergone an evolutionary process from poor to rich. Early research on the form of e-WOM has mostly explored the perceived usefulness and consumers attitude from the perspective of text and picture form of e-WOM, ignoring the intermediate mechanism of consumer behavior. From the perspective of consumer imagination, this paper quantifies the formal characteristics of e-WOM, and further explores the influence process of the visual cues of e-WOM on consumers' willingness.

Based on the perspective of consumer psychology processing, it is the main problem to explore the influence of visual cues of e-WOM on consumers' perception of diagnosticity and purchase intention. This paper collects data through questionnaires, and uses SPSS23.0 and Amos23.0 to verify the significant impact of visual cues of e-WOM on consumers' mental imagery and purchase intention, and finally draws marketing management enlightenment.

2.   LITERATURE REVIEW

2.1 Studies on e-WOM

With the advent of internet era, traditional word-of-mouth has broken through the boundaries of the

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original interpersonal relationship, and is frequently shared in online communities such as forums. E-WOM has become an important reference for influencing consumer decision-making. Then the research on the influence of e-WOM media form is discussed. According to the different forms of e-WOM media, the corresponding research can be divided into three categories: text, picture, and video. Based on the study of text-based e-WOM, scholars have conducted in-depth research on the influence of consumers' willingness to purchase from the aspects of word-of-mouth quality [1], number [2], and valence [3]. With regard to the research on picture-based e-WOM, scholars have studied from the consistency of word-of-mouth, the usefulness of graphic overlay and the single picture and word-of-mouth based on the adjustment of product types, which means that when the export monument is consistent, it has a significant impact on consumers' willingness to purchase [4], graphic overlay is more useful than text. Image-based word-of-mouth has a more significant impact on consumers' purchase of sensory products than non-sensory products [5]. Video-based e-WOM presents relatively realistic visual information, expressing the user's experience of using the product in a dynamic and fluid way, which has an important impact on the perception of the reviewer [6]. However, there is a lack of discussion about the intermediate mechanism and influence process of the influence of e-WOM features on consumers' willingness.

2.2 The impact of visual information on consumer behavior

Consumers often look for various types of information to assist their purchasing decisions, and different forms of information presentation have different impact on consumers. Visual cues of information provide consumers with intuitive, real-world information about the product, thus enabling consumers to better understand the product and likely to have emotional or psychological aspirations or rejections of the product due to the effects of the image or video. , thereby affecting their willingness to act. The form of e-WOM that consumers can access is mainly divided into verbal information and visual information. Alesandrini believes that visual information has a dominant effect in human memory, which can trigger consumer mental imagery processing and strengthen the memory of picture content [7]. Chen & Roders shows that fun is an important feature of online information. They define fun as an attractive and exciting feature of online information, and the interest of information can impress information recipients. And affect the dissemination effect of information [8]. Kim believes that compared with verbal information, visual information will promote consumers' emotion, cognitive attitudes and purchase intention [9]. Jungmin yoo explored the impact of the specific degree of visual information and verbal information on consumer perception, and believed that specific texts and images would promote consumers' psychological imagination, thus enabling consumers to generate better emotional perception and promote purchase intention [10].

3.   THEORETICAL BACKGROUND AND HYPOTHESES

The clue is to the thread and development of a thing. It is a kind of stimulation, which is used to guide and drive the development of things. In clue utilization theory, the clue is defined as "information", and it is directly observable by consumers. The premise of clue generation requires two information entities, so the general research also explores from the perspective of the information sender and receiver. The information form of e-WOM includes not only text, but also visual information such as picture and video, which is defined as visual cues of information. Davis & Khazanchi defines the visual cues of e-WOM as any means of disseminating images used to evaluate product or service characteristics [11]. Various forms of e-WOM can convey the product information to consumers from different angles. For example, the color and shape of the product can only be described by words or videos. Rich visual cues can bring consumers a fun and vivid product experience. Through the information conveyed by the visual cues of e-WOM, consumers are able to form product expectations and help consumers make decisions.

According to the clue utilization theory, the visual cues of e-WOM contain a combination of verbal information and visual information. The increase in the amount of information allows consumers to better understand information and reduce consumers' uncertainty of product purchase has a clearer understanding of the product [6]. Compared with single verbal information, the visual information of e-WOM is vivid, and the dynamic scene and the fluency of the screen make it easier for consumers to produce "visual portrayal effect", imagine the situation of self-use products, and enhance the psychological image of consumers machining. Therefore, we propose the hypothesis:

H1 visual cues of e-WOM have a positive impact on consumers' mental imagery.

H2 visual cues of e-WOM have a positive impact on consumers' perceived diagnosticity.

H3 visual cues of e-WOM have a positive impact on consumers' purchase intention

Purohit & Srivastava believes that when consumers evaluate product quality, they will classify products into a certain quality level based on clues. Criteria diagnostics refers to the extent to which consumers can judge the quality through current clues, reflecting the role played in the product evaluation process [12]. The reason why mental imagery affects consumers is that it is a perceptual way of processing, and the information encoded in this way is more abundant. The higher the degree of mental imagery processing, the easier it is to recall information and the smooth processing of information [13]. On the other hand, the credibility of the situation will affect the extent to which the consumer evokes the imaginary content, which refers to the possibility that the consumer imagines himself in this scene. The higher the credibility of the situation, the higher the degree of psychological image processing, and the psychological image generation related to the self-use products [14]. Therefore, mental imagery will produce self-convincing and more intense attitudes, which in turn will promote the willingness to purchase [15]. In this paper, the visual cues of e-WOM will enhance consumer's mental imagery processing and promote consumers' judgment on products and willingness to purchase. Therefore, we propose the hypothesis:

H4 mental imagery of consumers will have a positive impact on their perceived diagnosticity;

H5 mental imagery of consumers will have a positive impact on purchase intention;

H6 perceived diagnosticity of consumers will have a positive impact on their purchase intention;

In summary, the research model of this paper is as follows:

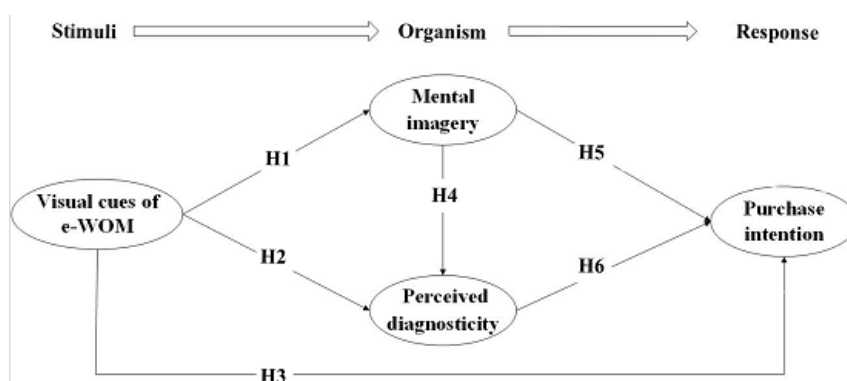**Figure 1.   Research model**

4.   RESEARCH   METHOD

4.1 Research survey.

The study selected students from a university in Sichuan Province as an experimental sample. First, the participants were told to imagine that they were in need of online shopping for a certain product and had sufficient ability to pay. By asking "Whether you will pay attention to the online WOM of related products when

online shopping" and "Is there any online shopping experience" to filter the research object, as long as one of the two questions answers "No", the questionnaire is invalid. Finally, 323 questionnaires were collected, and 300 valid questionnaires were screened. All variables were tested using the Likert 7 scale, with 1 indicating a very low level and 7 indicating a high degree.

Table 1.   Constructs and measurement items

Construct	Question items		Origins
Visual cues of e-WOM	(1)	The overall layout of e-WOM information is neat, beautiful, and easy to read	Bi Jidong [16]
	(2)	The e-WOM information is rich in expression, including text, pictures and videos.	
	(3)	The e-WOM information such as text, pictures, sounds, animations, etc. is high-definition, reflecting the product characteristics.	
Mental imagery	(1)	Through the visual clues of e-WOM, you can smoothly think of the picture of using the product	Zhao et al[17]
	(2)	Through the visual clues of e-WOM, you can clearly think of the picture of your own use of the product.	
	(3)	Through the visual clues of e-WOM, you can imagine how you use the product.	
	(4)	Through the visual clues of e-WOM, you can imagine how you look after using the product	
Perceived diagnosticity	(1)	Promote your understanding of product quality through visual cues of e-WOM	Jiang et al [18]
	(2)	Visual cues through e-WOM help you understand product performance	
	(3)	Visual cues through e-WOM can help you become familiar with the use of products	
	(4)	Visual cues through e-WOM help you evaluate products	
Purchase intention	(1)	You have a high probability of purchasing the product	Taylor and Baker [19]
	(2)	When you need this product next time, you are willing to buy it.	

4.2 Data sample.

As can be seen from the table below, the ratio of male to female students in this survey was 43% and 57%, respectively, according to the survey released by China E-Commerce Research Center, the sex ratio of online shopping groups is basically equal in 2018. From the age perspective, young people over the age of 18 account for a large proportion of the subjects, of course, this has a lot to do with the test environment for the university campus. From the perspective of education level, the results of the survey released by the China Electronic Commerce Research Center show that college students have become the main force of online shopping. By analyzing the online shopping frequency data of respondents, it can be seen that most of the respondents have more frequent online shopping frequency, and the number of respondents who have at least one online shopping per month has reached 74.33%. The subject is familiar with the online shopping environment and processes, and understands the important role of e-WOM in the online shopping process.

Table 2.   Demographic analysis

Characteristic variable	Number of features	Number	Proportion
Gender	Male	129	43%
	Female	171	57%
Age	Under 18 years old	17	5.67%
	18-22 years old	211	70.33%
	22 years old or older	72	24%
Education level	Specialist	37	12.33%
	Bachelor	241	80.33%
	Master degree and above	22	7.34%
Online shopping frequency	At least once a month	223	74.33%
	Not at least once in three months	65	21.67%
	At least once every six months	12	4%

5. DATA ANALYSIS AND RESULTS

5.1 Measurement model testing

The reliability of the questionnaire reflects the consistency or stability of the results of the questionnaire. Amos23.0 is used to analyze the data, and the results of the relevant indicators are shown in the following table: Chronbach's α (CA) of each construct is greater than the recommended threshold of 0.7, indicating higher measurement reliability; comprehensive reliability (CR) also exceeds 0.7, the mean variance extraction (AVE) is greater than 0.5, and the factor load is greater than 0.6, indicating good agreement between the measured items.

Table 3.   Results of reliability and validity analysis

Constructs	Items	Standardized factors loading	Cronbach'α	CR	AVE
Visual cues of e-WOM	VC1	0.817	0.780	0.789	0.557
	VC2	0.709			
	VC3	0.707			
Mental imagery,	MI1	0.804	0.837	0.842	0.573
	MI2	0.740			
	MI3	0.690			
	MI4	0.788			
Perceived diagnosticity	PD1	0.829	0.797	0.811	0.521
	PD2	0.753			
	PD3	0.628			
	PD4	0.659			
Purchase intention	PI1	0.871	0.824	0.867	0.767
	PI2	0.879			

The correlation coefficient between variables is obtained by SPSS23.0 software analysis. The correlation coefficient between each variable is smaller than the arithmetic square root of the average variance extraction corresponding to each variable on the diagonal line, which indicates that the discriminant validity of the questionnaire is very good. The factor load of each variable is greater than its factor load value in other variables, which further indicates that the construct has good convergence validity. Since the correlation coefficient between multiple constructs in the correlation matrix is high, the multi-collinearity test is further carried out. The test results show that the highest value of VIF is 2.246 and the lowest tolerance is 0.445. Therefore, multi-collinearity is This article is not a significant issue in the data.

Table 4.   Analysis of discriminant validity

Constructs	VC	MI	PD	PI
Visual cues of e-WOM	0.746			
Mental imagery,	0.648	0.760		
Perceived diagnosticity	0.627	0.627	0.722	
Purchase intention	0.666	0.745	0.717	0.875

Note: Diagonals represent the sqrt of average variance eatracted (AVE)

Table 5.   Multicollinearity test

Constructs	Tolerance	VIF
Visual cues of e-WOM	0.549	1.822
Mental imagery,	0.458	2.182
Perceived diagnosticity	0.445	2.246

Dependent variable: Purchase intention

5.2 Strctural model testing

5.2.1 Direct effect analysis

The fitting index of the structural equation is close to the recommended level, X2/df=2.216, GFI=0.940, AGFI=0.906, NFI=0.943, CFI=0.968, RMSEA=0.064, thus indicating good modelability. In order to verify whether the remaining hypotheses are true, this paper carries out a structural equation model test to analyze the path coefficients of the model. The results obtained by analyzing the data files using Amos 23.0 software are shown in the figure below. As can be seen from the figure, the visual cues of e-WOM have a significant impact on the consumer's mental imagery (β=0.70, p<0.001) and perceived diagnosticity (β=0.26, p<0.01). Willingness has a significant impact (β = 0.19, p < 0.01), which confirms H1, H2 and H3, which indicates that e-WOM displays product related information in various forms, by browsing vivid information, consumer imagination By using the product itself, the rich information reduces the uncertainty of consumers' online shopping, promotes consumers' judgment on product attributes, and promotes their purchase intention. Mental imagery has a significant impact on consumer perception diagnosticity (β=0.73, p<0.001) and purchase intention (β=0.34, p<0.001), and consumer perception diagnosticity will further affect their willingness to purchase (β = 0.31, p < 0.001). This shows that consumers can deepen their judgment on product attributes by imagining the scene of their own experience, and ultimately promote their recognition and purchase of products.
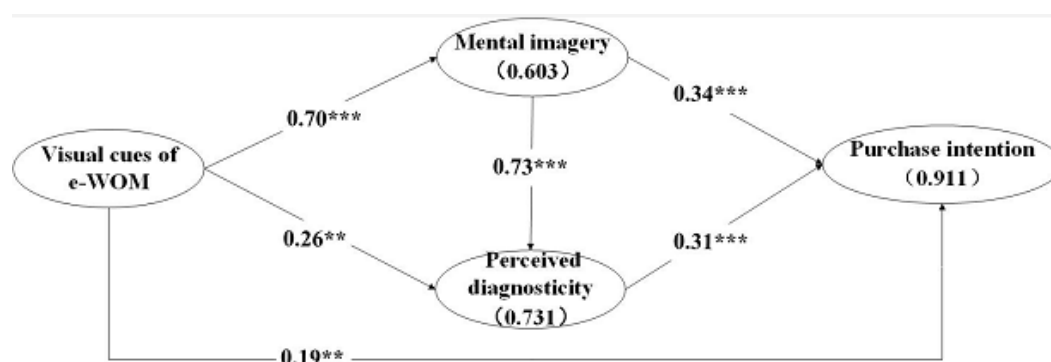

Figure 2.　Results of structural modeling analysis

5.2.2 Indirect effect analysis

We need to explore the mediating role of mental imagery and perceived diagnosticity in the relationship between visual cues and purchase intention, using bootstrapping in Amos23.0. First we examined whether visual cues have a mediating effect on purchase intention. Bootstrapping Results show that under the 95% confidence interval, the results of the intermediary test do not include 0 ([0.343, 0.703]), which indicates that is a mediating effect between visual cues and purchase intention. This indicates that the influence of visual cues on purchase intention was partly mediated by mental imagery and perceived diagnosticity. Then we examined the significance of three indirect paths between visual cues and purchase intention, and examined the specific indirect effects by PRODCLIN2 software, that computes confidence limits for the specific indirect path, and it can be used to obtain more accurate confidence limits for the indirect effect. The results are shown in the Table. We can find all the three indirect paths were significant, for 0 is not included in the confidence interval of any in direct paths. The path "VC->MI->PI" has the largest indirect effect, which accounted for 49.7% indirect effects of the information visualization and the purchase intention, so this path can be pursue as the best indirect path. Other path "VC->PD->PI" and "VC->MI->PD->PI" means perceived Diagnosticity, mental imagery and perceived diagnosticity mediate the relation between visual cues and purchase intention.

Table 6.   Mediating effect test results

Indirect path		Mackinnon Prodclin2 95%CI		Specific indirect effects
		Lower	Upper	
VC->MI->PI		0.098	0.411	0.298/0.600=0.497
VC->PD->PI		0.013	0.198	0.101/0.600=0.168
VC->MI->PD->PI	VC->MI->PD	0.304	0.771	0.201/0.600=0.335
	MI->PD ->PI	0.095	0.409	

6.   CONCLUSION AND RECOMMENDATION

6.1 Conclusion

This paper reveals the intermediate mechanism and influence process of visual cues of e-WOM on consumers' purchasing intentions, and validates influence of visual cues of e-WOM on consumers through structural equation modeling. The role of mental imagery, perceived diagnosticity and purchase intention, and further verification of mental imagery promotes consumers' perception of diagnosticity and their purchase intention.

6.2 Recommendation

Previous studies are mostly on the comparative study of specific e-WOM forms such as text and pictures. This paper constructs the corresponding research model based on the formal characteristics of e-WOM, and discusses its influence on consumers' willingness based on the perspective of mental imagery processing. Through empirical research and data analysis, it is found that in marketing practice, marketers can present various forms of e-WOM on the corresponding e-commerce platform, promote users' imagination of their own experience products, and narrow the distance between consumers and products. At the same time, the rich amount of information will also reduce the uncertainty of consumers' judgment on products and promote decision-making process of consumers.

6.3 Limitation and future work

There are still some limitations in this study. The experimental samples in this paper are all college students. Whether the research conclusions are extended to other groups needs further verification; this paper does not discuss the impact of product types on the final results. For sensory products, the impact of vivid e-WOM information on consumers' willingness Whether the role is more significant is not known; in addition to mental imagery, whether there are other factors will also affect the will of consumers, it is the problem we will explore later.

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