

Analysis on the influence of short video marketing on Chinese college students' purchase intention

Long Han*, Fuquan Qin, Mingxue Xie

School of Management, Qufu Normal University, Rizhao 276800, China

qfnuhl1145@163.com*, q15266061305@163.com, xiemingxue2000@163.com

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Abstract: With the further development of mobile Internet technology, various forms of short video software have opened up a short video era for the audience and endowed video with new era connotation. Kwai tiktok, APP, and so on, are becoming popular among people's lives, and become the most widely spread and most popular social networking platform for young people. With the help of short videos, college students have created a unique network consumption landscape, and also quietly changed the network marketing mode of enterprises. Short video marketing is an important way for enterprises to commercialize short video. However, what is the specific effect of enterprise short video marketing? What is the relationship between short video marketing and consumers' purchase intention? This study tries to establish a model that affects college students' purchase decision, and puts forward reasonable suggestions for short video marketing.

1. Introduction

In recent years, the research on short video in various fields has emerged one after another. Due to the continuous exploration of the commercial value of short video, scholars have shown great enthusiasm for the research on short video marketing.

However, most of the research on short video marketing^[1] by Chinese scholars is at the sociological level, and the marketing model is established by combining the relevant theories of advertising and communication. From the perspective of statistics, there is less literature on quantitative analysis of enterprise short video marketing. This paper starts from this gap and takes college students as the survey object from the perspective of statistical analysis, More in-depth analysis of the specific effects of enterprise short video marketing^[2], and the relationship between short video marketing and consumers' purchase intention.

2. Theoretical models and assumptions

2.1 Relationship assumptions between intermediate variables and outcome variables

H1: the perceived value of College Students' consumers has a positive and significant impact on purchase intention.

H2: the perceived risk of College Students' consumers has a negative and significant direct impact on purchase intention.

2.2 Relationship assumptions between antecedent variables and outcome variables

(1) Brand influence

H3: brand influence has a positive and significant direct impact on consumers' perceived value.

H4: brand influence has a negative and significant direct impact on consumers' perceived risk.

H5: brand influence has a positive and significant direct impact on consumers' purchase intention.

(2) Information quality

H6: the information quality of enterprise short video has a positive and significant direct impact

on consumers' perceived value.

H7: the information quality of enterprise short video has a negative and significant direct impact on consumers' perceived risk.

H8: the information quality of enterprise short video has a positive and significant direct impact on consumers' purchase intention.

(3) Marketing activities

H9: short video campaign marketing has a positive and significant direct impact on consumers' perceived value.

H10: short video campaign marketing has a negative and significant direct impact on consumers' perceived risk.

H11: short video campaign marketing has a positive and significant direct impact on consumers' purchase intention.

(4) Interactive marketing

H12: short video interactive marketing has a positive and significant direct impact on consumers' perceived value.

H13: short video interactive marketing has a negative and significant direct impact on consumers' perceived risk.

H14: short video interactive marketing has a positive and significant direct impact on consumers' purchase intention.

(5) Participation of opinion leaders

H15: opinion leaders' short video participation has a positive and significant direct impact on consumers' perceived value.

H16: opinion leaders' short video participation has a negative and significant direct impact on consumers' perceived risk.

H17: opinion leaders' short video participation has a positive and significant direct impact on consumers' purchase intention.

(6) Interaction in the circle of friends

H18: the interaction of the circle of friends has a positive and significant direct impact on consumers' perceived value.

H19: the interaction of the circle of friends has a negative and significant direct impact on consumers' perceived risk.

H20: the interaction of the circle of friends has a positive and significant direct impact on consumers' purchase intention.

2.3 Theoretical model construction

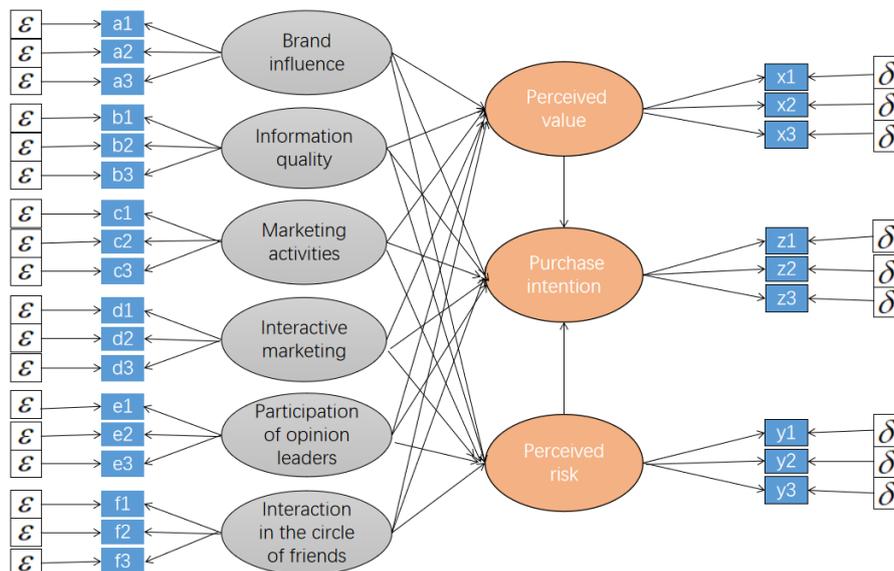


Figure 1. Research theoretical model

3. Research scheme

3.1 Questionnaire design

This paper uses the questionnaire to obtain data. The questionnaire has 31 items, most of which are from the scale developed by domestic and foreign scholars, and has good reliability and validity. Among them, the first 27 items adopt Likert 5 scale, and give 1 ~ 5 points from "very disagree, disagree, general, agree and very agree".

3.2 Presurvey

In order to test the accuracy of the questionnaire, a pre survey is conducted before the formal survey, and the questionnaire is modified according to the pre survey results. The reliability and validity of the questionnaire data are analyzed. The alpha coefficient of each variable is greater than 0.8, the kmo value is greater than 0.7, and the p value is 0.000. Therefore, the questionnaire design is reasonable and does not need to be modified.

3.3 Questionnaire distribution

700 questionnaires were distributed to 7 universities in Rizhao University City through the questionnaire star link, with a recovery rate of 100%. After deducting 36 invalid questionnaires with missing answers, non college students and unified answers, 664 valid questionnaires were obtained.

4. Empirical analysis

4.1 Reliability and validity

The consistency of the questionnaire is good ($\alpha = 0.935 > 0.8$), brand influence, information quality, activity marketing, interactive marketing, participation of opinion leaders, interaction in the circle of friends, perceived value, perceived risk and purchase intention.

The kmo values were 0.863, 0.773, 0.715, 0.857, 0.831, 0.796, 0.842, 0.881 and 0.836 respectively, and the P values were 0.000. The questionnaire had good reliability and validity.

Six factors were obtained after the factor rotation of the antecedent variable and the result variable by the maximum variance method, and three factors were obtained after the factor rotation of the intermediate variable and the result variable. Through confirmatory factor analysis. Therefore, the theoretical model does not need to be adjusted.

4.2 Rorrelation analysis

4.2.1 Correlation analysis between short video marketing factors, dependent variables and intermediate variables

Import the data into spss23.0^[3], calculate the short video marketing factors and perceived risk, perceived value and purchase intention. The correlation coefficient of is shown in Table 1:

According to the table, there is a moderate positive correlation between the variables of interactive marketing, the interaction and perceived value of the circle of friends, interactive marketing, the interaction and purchase intention of the circle of friends at the significant level of 0.01, and a moderate negative correlation between information quality and perceived risk at the significant level of 0.01. Brand influence, event marketing, participation of opinion leaders and perceived value, perceived risk and purchase intention have a low correlation at a significant level of 0.01; Information quality has a low correlation with perceived value and purchase intention at a significant level of 0.01. Therefore, enterprise short video marketing has a positive impact on College Students' perceived value and purchase intention, and a negative impact on College Students' perceived risk.

Table 1. Correlation analysis results between short video marketing factors and perceived value, perceived risk and purchase intention

		Perceived value	Perceived risk	Purchase intention
Brand influence Information quality	Pearson correlation	0.391**	-0.312**	0.465**
	Significance (bilateral)	0.002	0.000	0.000
Activity marketing Interactive marketing	Pearson correlation	0.378**	-0.544**	0.378**
	Significance (bilateral)	0.000	0.000	0.000
Participation of opinion leaders	Pearson correlation	0.445**	-0.322**	0.473**
	Significance (bilateral)	0.000	0.001	0.000
Brand influence Information quality	Pearson correlation	0.532**	-0.402**	0.553**
	Significance (bilateral)	0.002	0.000	0.00
Activity marketing Interactive marketing	Pearson correlation	0.441**	-0.359**	0.439**
	Significance (bilateral)	0.000	0.000	0.000
Participation of opinion leaders	Pearson correlation	0.506**	-0.478	0.512**
	Significance (bilateral)	0.001	0.000	0.000

(**Showed significant correlation at the 0.01 (bilateral) level)

4.2.2 Correlation between perceived value, perceived risk and purchase intention

Table 2. Correlation analysis results of perceived value, perceived risk and purchase intention

Variable		Perceived value	Perceived risk
Purchase intention	Pearson correlation	0.445**	-0.402**
	Significance (bilateral)	0.000	0.000

(** Indicates a significant correlation at the 0.01 level (bilateral))

According to the above table, the correlation coefficient between perceived value, perceived risk and purchase intention at the 0.01 significance level is close to between 0.4 and 0.5, which indicates that there is a low positive correlation between perceived value and purchase intention at the 0.01 significance level, and a low negative correlation between perceived risk and purchase intention at the 0.01 significance level.

4.3 Modeling and analysis of purchase intention and its influencing factors

The structural equation model^[4] constructed in this study contains nine structural variables, of which six independent variables are six factors of enterprise short video marketing, namely information quality, information authenticity, activity marketing, interactive marketing, opinion leader participation and relatives and friends participation; Two mediating variables are perceived risk and perceived value, and one dependent variable is purchase decision.

4.3.1 Fit analysis of structural equation model

According to the academic research practice, this study adopts the following fitting indexes: benchmark fitting index NFI, chi square divided by degree of freedom ratio Cmin / DF, goodness of fit index GFI, comparative fitness fitting index CFI, incremental fitness fitting index IFL, The seven fitting indexes of mean square error square root RMSEA are used to jointly evaluate the model. In this paper, the model fits the index table 3.

Table 3. Structural equation fitting index

Fitting index	Numerical value	Judgment criteria	Result analysis
CMIN/DF	1.304	If the value is < 3, the closer it is to 0, the better the fit between the model and the data	Good fitting
NFI	0.782	The value is between 0-1. The higher the value, the better the fitting	Good fitting
GFI	0.830	The value is between 0-1. The higher the value, the better the fitting	Good fitting
CFI	0.856	The value is between 0-1. The higher the value, the better the fitting	Good fitting
IFI	0.879	The value is between 0-1. The higher the value, the better the fitting	Good fitting
RMSEA	0.05	When the value is < 0.05, the fitting is very good.	Good fitting

It can be seen from the above table that the ratio Cmin / DF of chi square divided by its degrees of freedom is 1.304, which is less than the reference value 5 of the judgment standard, so the fitting is good; The NFI is 0.782, which is very close to 1, indicating that the fitting is very good; The value of GFI is 0.830, which is close to 1, and the fitting is good; The value of CFI is 0856, which is very close to 1, indicating good fitting; The value of IFI is 0879, which is very close to 1, indicating good fitting. The value of RMSEA is 0.05, indicating good fitting. In general, all the indexes calculated by AMOS basically meet the standards set by the fitting index, indicating that the research model fits well with the data, which proves that the theoretical model of this study is reasonable.

4.3.2 Causality hypothesis test

In this study, Amos is used to verify various hypotheses, and the path coefficients are as follows.

Table 4. Amos inspection path system

Original hypothesis	Route	Standard regression coefficient	Significant level	Inspection results
H11	Perceived value < --- brand influence	-0.082	**	support
H21	Perceived value < --- information quality	0.269	*	support
H31	Perceived value < --- event marketing	0.046	**	support
H21	Perceived risk < --- interactive marketing	-0.228	*	support
H22	Perceived risk < -- participation of opinion leaders	-0.014	*	Don't support
H23	Perceived risk < -- interaction in the circle of friends	0.01	*	Don't support
H41	Perceived value < --- interactive marketing	0.087	**	support
H51	Perceived value < -- participation of opinion leaders	-0.113	**	support
H61	Perceived value < -- interaction in the circle of friends	-0.036	*	support
H24	Perceived risk < --- event marketing	-0.061	**	support

H25	Perceived risk information quality	< ---	0.105	**	support
H26	Perceived risk brand influence	< ---	0.002	**	Don't support
H1	Purchase intention perceived value	< ---	0.593	**	support
H2	Purchase intention perceived risk	< ---	0.527	**	support
H3	Purchase intention brand influence	< ---	0.603	**	support
H4	Purchase intention information quality	< ---	0.823	**	support
H5	Purchase intention event marketing	< ---	0.411	**	support
H6	Purchase intention interactive marketing	< ---	0.392	**	support
H7	Purchase intention participation of opinion leaders	< --	0.459	*	support
H8	Purchase intention interaction in the circle of friends	< --	0.529	**	support

(* * indicates significant correlation at level 0.01 (bilateral), * indicates significant correlation at level 0.05 (bilateral))

From the regression analysis in Table 4 above, it can be seen that brand influence, information quality, event marketing, interactive marketing, participation of opinion leaders, interaction in the circle of friends, perceived value, perceived risk and purchase intention have obvious causal relationships. The path coefficient is shown in the table above, and all assumptions have been further verified.

4.4 Analysis of differences in consumer characteristics

The characteristics of college students investigated in this study include their short video use time, gender and monthly living expenses. Next, SPSS will use the statistical method of two independent sample t-test for gender to study the differences of this feature in each research variable, and the statistical method of one-way ANOVA will be used to study the differences of short video use time and monthly cost of living.

4.4.1 The differences of College Students' gender characteristics in various variables

Next, SPSS will use the statistical method of two independent sample t-test for gender to study the differences of this feature in various research variables. The results are shown in the table6:

Table 5. Independent sample t-test for gender

Variable	Gender				T-test p value
	Male		female		
	Mean	Variance	Mean	variance	
Brand influence	3.767	0.723	3.457	0.831	0.141
Information quality	3.864	0.675	3.768	0.634	0.088
Activity marketing	3.321	0.653	3.377	0.774	0.013
Interactive marketing	3.104	0.761	3.143	0.773	0.2
Participation of opinion leaders	3.201	0.669	3.316	0.823	0.311
Circle of friends interaction	3.132	0.735	3.345	0.765	0.166
Perceived value	3.478	0.725	3.431	0.679	0.131
Perceived risk	3.125	0.843	3.424	0.764	0.017
Purchase decision	3.123	0.621	3.532	0.744	0.231

As can be seen from the above table, only the p value of perceived risk is less than 0.05, and other items are greater than 0.05. The following conclusions can be drawn:

(1) There are significant differences between male and female college students' perception of enterprise short video activity marketing. Compared with male college students, female college students are more interested in and pay more attention to enterprise short video activity marketing;

(2) There are significant differences in the impact of short video marketing factors on the perceived risk of male and female college students. Compared with male college students, short video marketing factors make female college students have a better attitude.

4.4.2 The differences of College Students' short video use time in various research variables

One way ANOVA was used to study the influence of College Students' short video use time on various research variables. The results are as follows:

Table 6. One way ANOVA of short video usage time

Variable	F value	Significance	Analysis and test conclusion (a = more than 1 year, B = 1-2 years, C = 2-3 years, d = 3 years)
Information quality	0.866	0.137	
Information authenticity	1.472	0.146	
Activity marketing	0.987	0.179	
Opinion leader participation	0.633	0.234	
Interactive marketing	2.667	0.021	c>a, b>a, d>a
Family and friends participation	1.238	0.093	
Perceived value	0.534	0.986	
Perceived risk	0.832	0.432	
Purchase decision	0.933	0.322	

It can be seen from the above table that only the one-way ANOVA of interactive marketing has significant difference. Then, this study uses LSD method^[7] to further analyze interactive marketing, and fills the analysis results in the last column of the table. According to the results, the following conclusions can be drawn:

There are significant differences in the use time of College Students' short videos in interactive marketing. College students who use short videos for more than 1 year are more willing to participate in enterprise interactive marketing than those who use short videos for less than 1 year.

4.4.3 Differences of monthly living expenses of college students in various research variables

One way ANOVA was used to study the influence of College Students' monthly living expenses on various research variables. The results are shown in Table 7:

Table 7. One way ANOVA of monthly cost of living

Variable	F value	P value	Analysis and test conclusion (A: ≤ 1000, B: 1000 ~ 2000, C: 2000 ~ 3000, D: ≥ 3000)
Information quality	0.965	0.114	-
Information authenticity	1.032	0.139	-
Activity marketing	2.077	0.016	b>a, b>d, c>a
Opinion leader participation	0.834	0.419	-
Interactive marketing	1.067	0.161	-
Family and friends participation	1.229	0.197	-
Perceived value	0.773	0.974	-
Perceived risk	0.912	0.412	-
Purchase decision	1.923	0.023	d>a, d>b, c>a

The LSD method ^[5]is used for further analysis, and the analysis results are listed in the last column of the table. According to the results, the following conclusions can be drawn:

(1) There are significant differences in activity marketing variables of College Students' monthly living expenses. The impact of activity marketing on students with monthly living expenses of 1000 ~ 2000 and 2000 ~ 3000 is greater than that of students with monthly living expenses of less than 1000.

(2) College students' monthly living expenses have significant differences in purchase decision variables. Students with monthly living expenses of 2000-3000 are more likely to make positive consumption decisions than students from other income groups.

5. Conclusions and suggestions

Through the modeling and analysis of the questionnaire survey results, this paper mainly obtains the following conclusions: first, the six microblog marketing factors have practical guiding significance for brand marketing and can explain most consumers' purchase decisions. Second: female college students, users with long service life of microblog and college students whose monthly living expenses are at the medium and high-end level (2000-3000 yuan) are more likely to make active consumption decisions because of microblog marketing. Third: brand influence and interactive publicity can significantly improve consumers' purchase intention. In view of the above conclusions, this paper puts forward the following suggestions for brand microblog marketing: first, provide expert guaranteed publicity, "Three Guarantees" service and free samples to effectively reduce perceived risk. Second: pay attention to female users and users with long service life of microblog. Third: focus on microblog marketing of medium and high-end products. Fourth: pay attention to brand influence and interactive marketing in the off-season to promote consumers to make consumption decisions.

References

- [1] Gao Yan. Reflection and reconstruction of short video marketing mode in the new media era -- Taking the tiktok short video platform as an example. *Publishing wide angle*, 2019(08):62-64.
- [2] Shan Wensheng, Li Lei. Research on short video marketing strategy and value in the era of mobile Internet. *Journal of Changsha University*, 2015, 29(04):35-37.
- [3] Sun Yimin. SPSS software was used to analyze the correlation between variables [J] *Journal of Xinjiang Institute of education*, 2007(02):120-123.
- [4] Wen Zhonglin, Hou Jietai, marsh Herbert .Structural equation model test: fitting index and chi square criterion [J] *Journal of psychology*, 2004 (02): 186-194
- [5] Liu Fei, Yu yelan, Huang Yuefei .Using SPSS and Excel to realize the letter marking of LSD multiple comparison [J] *Science, education and culture collection*, 2017 (03): 52-53