



# The influence of live streaming on the college students' purchase intention

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**Abstract.** The purpose of this study is to explore the influence factors of live broadcast on college students' purchase intention, and to explore the influence of these factors on college students in Guangxi. Mixed methods, including a questionnaire on a sample of university students in Guangxi. The collected data were analyzed using descriptive analysis, correlation analysis, and regression analysis. Research Methodology: A questionnaire survey was conducted on 400 Guangxi university students using random sampling method. A self-completed questionnaire was used as the research instrument on Questionnaire Star, which included questions related to Interactivity, Internet Word-of-Mouth (IWOM), Price discount strength, Attraction, Entertainment and Purchase Intention related questions. Validity and reliability analyses were conducted to ensure the quality of the data collected. The research results are as follows: Internet Word-of-Mouth (IWOM), Price discount strength, Attraction and Entertainment have positive effect on purchase intention, while the relationship between interactivity and purchase intention is not significant. In order to increase purchase intention, Attraction and Entertainment can be strengthened. Since Attraction and Entertainment have the most significant effect on purchase intention, it is recommended to strengthen the design of Attraction and Entertainment in the product or service, and also optimise the IWOM and price strategy by optimising the management and marketing of the IWOM, as well as flexibly formulating the price discount strategy to increase the purchase intention. Although interactivity did not have a significant effect in the regression analysis, it is still recommended to consider all factors and develop an integrated marketing strategy to increase overall purchase intention. Purchase intention can be enhanced more effectively to promote sales and market share growth of products or services.

**Keywords:** live-streaming, Interactivity, Attraction, Entertainment, Price discount strength, Purchase intention

## 1 INTRODUCTION

The rapid development of mobile Internet technology and the continuous reduction of the threshold of network use make the Internet "fly into the ordinary people's homes"[7]. On February 25, 2022, the 49th Statistical Report on Internet Development in China released by CNNIC pointed out that, as of December 2021, the scale of China's Internet users was 1.032 billion, and the Internet penetration rate reached 73%. Social media is sought after by the majority of Internet users because of its social attributes and media communication characteristics. According to the 2020 'Social Retail' White Paper in China jointly released by The Boston Consulting Group (BCG) and Tencent Marketing Insight (TMI), the penetration rate of online social media in China has reached 97 percent, with Chinese consumers spending nearly four hours on their mobile phones, including more than 2.3 hours on social media[1]. It can be said that social media has been integrated into People's Daily life, and has become an important tool for people to express themselves and communicate, and has shaped people's cognition and behavior in a subtle way. As an emerging sales method, live streaming e-commerce marketing is increasingly widely used in the commercial field[6]. College students are one of the main consumer groups of the Internet age, in modern society, college students have more distinct personality, college students in the consumer choice of personality and unique is the main characteristics, often for fresh exciting products will be more interested in, at the same time they will have the courage to try different challenges in buying, study the influence factors of their purchase intention has certain importance[3]. This study mainly in Guangxi college students as the research object, under the social media marketing environment, based on the electricity webcast related literature, combined with the characteristics of electricity live webcast, to explore the electricity live platform on the main factors of college students buying intention in Guangxi, and based on the research conclusion for electricity live industry development feasibility proposal is put forward.

## 2 RELATED WORK

Laura L. Nelson and Robert A. Kozinets (2003) showed that online word-of-mouth can have a positive effect on purchase intentions[4]. Leonard Lee, Claudia Townsend (2009) proposed that the price discount can affect consumers' purchase intention, Can even affect the perceived value of the product, Wang Qiushi (2014), Consumers are influenced by price discounts and number of purchases, And then produce a sense of pleasure and arousal. Chen Jing (2018) that the personal charm of web celebrity has a significant positive impact on consumers' purchase intention[2]; Wang Miao (2017) in the study on the influence of Taobao's red attraction on consumers' buying intention, It proves that the net red personal charm has a positive impact on the purchase intention[5]. Zheng Xing (2019) Consumers' heart flow experience (pleasure and focus) has a positive impact on impulse purchase intention. Albert Weinstein (2018). According

to his research, interactivity does not always have a positive impact on purchase intentions, as interactivity may make purchase decisions more complex, which in turn reduces purchase intentions.

### 3 METHOD

This paper takes college students in Guangxi universities as the research object. From the perspective of the research object, The research of this paper to 560024 undergraduates in Guangxi, in order to ensure the research of scientific and rigorous, this paper to the university of China Guangxi zhuang autonomous region 34 college students random sampling survey, through questionnaire star questionnaires, accumulated 400 questionnaires, to answer contradiction, unfinished invalid questionnaire, finally sort out 372 effective questionnaire, 93% efficiency, the data in this paper will be based on the 372 data analysis. Although there is a slight gap between the effective questionnaires and the theoretically required sample size, this gap is not significant, thus more objective and fair conclusions can be drawn from this study. Random sampling method was used in this study, which does not involve probability (non-probability sampling) Detailed data are presented in Table 1 below:

**Table 1.** Shows general information

Variables		Frequency	percentage
Gender	Man	182	48.9
	Female	190	51.1
	Total	372	100.0
Grade	freshman	87	23.4
	sophomore	90	24.2
	junior	86	23.1
	senior	109	29.3
	Total	372	100.0
Frequency of watching e-commerce live streaming	Many times a day	53	14.2
	Average once 1-2 days	83	22.3
	Average once every 3-5 days	140	37.6
	Average once every 6-10 days	61	16.4
	Average of more than once in 10 days	35	9.4
	Total	372	100.0
The amount spent on online shopping every month	Under 500 yuan	85	22.8
	500-1,000 yuan	153	41.1
	1000-3000 yuan	88	23.7
	More than RMB 3,000 yuan	46	12.4

	Total	372	100.0
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## 4 EXPERIMENTS AND RESULTS

### 4.1 Credibility analysis

Reliability refers to the credibility and trustworthiness of the data. Reliability analysis is the process of examining the consistency of the measurement tool and its results [8]. In this study, Cronbach's Alpha coefficient, commonly used in academia, was used as the indicator for assessing the questionnaire's reliability. Different coefficient values represent different levels of internal consistency. The specific criteria are as follows: when the alpha value is higher than 0.7, it indicates a high level of internal consistency and good reliability of the questionnaire; when the alpha value is between 0.35 and 0.7, it represents moderate reliability; when the alpha value is less than 0.35, the credibility of the survey results is low and should not be accepted. The results of the reliability analysis in this study are shown in Table 2. The overall Cronbach's Alpha value of the questionnaire reached 0.933, indicating good internal consistency and ideal reliability of the measurement scales used in the questionnaire. The Cronbach's Alpha values of the measurement scales for each factor in the study were all above 0.7, indicating good overall reliability of the questionnaire's scales.

**Table 2.** Questionnaire Cronbach's  $\alpha$

Variable Items	Sample size	N of Items	Cronbach's alpha
1. Interactivity	372	4	0.817
2. Internet Word-of-Mouth	372	4	0.865
3. Price discount strength	372	4	0.831
4. Attraction	372	4	0.827
5. Entertainment	372	4	0.844
6. purchase intention--Intention	372	3	0.803
7. purchase intention--Wishes	372	3	0.791
8. purchase intention--Purchase decision	372	3	0.830
Total	372	29	0.813

From Table 2 questionnaire Cronbach's alpha, it can be seen that the Cronbach's alpha for all coefficients is 0.813, Cronbach's alpha for Interactivity is 0.817, Cronbach's alpha for Internet Word-of-Mouth is 0.865, Cronbach's alpha for Price discount strength is 0.831, Attraction's Cronbach's alpha is 0.827, Entertainment's Cronbach's alpha is 0.844, Cronbach's alpha for intention is 0.803, Cronbach's alpha for Wishes is 0.791, and Cronbach's alpha for Purchase decision is 0.830. The reliability values of all the factors and the total factor of the questionnaire are more than 0.7, so it can be concluded that the questionnaire can be used to collect the real data and its reliability value meets the acceptance criteria.

### 4.2 Inferential Analysis

**Table 3.** Statistical tables describing the variables

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Interactivity	372	1	5	3.86	.903
Internet Word-of-Mouth	372	1	5	3.67	1.089
Price discount strength	372	1	5	3.71	.996
Attraction	372	1	5	3.76	.959
Entertainment	372	1	5	3.71	1.003
purchase intention	372	1	5	3.75	.802

From Table 3, it can be seen that had 372 samples, and each variable was evaluated based on 1 to 5 scales, where 1 indicating very disagreement and 5 indicating strongly agreement.

The mean is the central trend of each variable, and the table shows the higher mean scores for interactivity and attraction, at 3.86 and 3.76, respectively, indicating that they think the product or service is doing well in these aspects. In other aspects, such as internet word-of-mouth and entertainment, the average score was slightly lower at 3.67 and 3.71, respectively, which may indicate that people are more strictly evaluated about these aspects.

The standard deviation is the degree of dispersion of each variable and can help us understand the consistency of the whole sample for that variable. From this dataset et, the standard deviations are close in all variables, but some differences remain. For example, the standard deviation of 1.089 indicates a large difference in opinion on online reputation.

### 4.3 Analysis of Demographic Differences

**Table 4.** shows the results of the correlation coefficient analysis among PTPDS,PTAT,PTEN andPT

	Factor	PTIA	PTIWOM	PTPDS	PTAT	PTEN	PT
Pearson correlation	PTIA	1					
	PTIWOM	.386**	1				
	PTPDS	.345**	.298**	1			
	PTAT	.273**	.277**	.380**	1		
	PTEN	.330**	.323**	.345**	.480**	1	
	PT	.339**	.415**	.461**	.502**	.508**	1

\*\* . Correlation is significant at the 0.01 level (2-tailed).

From Table 4 The results of the analysis of the correlation coefficient betweenPTIA, PTIWOM, PTPDS, PTAT,PTEN and PT.

Based on the provided Pearson correlation coefficients matrix, we can analyze the correlation between each pair of variables:

Correlation coefficients between PTIA (Interactivity) and other variables:

Correlation coefficient with PTIWOM (Internet Word-of-Mouth) is 0.386, indicating a low degree of positive correlation between the two. Correlation coefficient with PTPDS (Price discount strength) is 0.345, indicating a low positive correlation between the two. Correlation coefficient with PTAT (Attraction) is 0.273, indicating a low positive correlation between the two. Correlation coefficient with PTEN (Entertainment) is 0.330, indicating a low positive correlation between the two. Correlation coefficient with PT (the purchase intention) is 0.339, indicating a low positive correlation between the two.

Based on the provided Pearson correlation coefficients matrix, we can analyze the correlation between each pair of variables:

Correlation coefficients between PTIWOM (Internet Word-of-Mouth) and other variables:

Correlation coefficient with PTPDS (Price discount strength) is 0.298, indicating a low positive correlation between the two. Correlation coefficient with PTAT (Attraction) is 0.277, indicating a low positive correlation between the two. Correlation coefficient with PTEN (Entertainment) is 0.323, indicating a low positive correlation between the two. Correlation coefficient with PT (The Intention in the purchase intention) is 0.415, indicating a moderate positive correlation between the two.

Based on the provided Pearson correlation coefficients matrix, we can analyze the correlation between each pair of variables:

Correlation coefficients between PTPDS (Price discount strength) and other variables: Correlation coefficient with PTAT (Attraction) is 0.380, indicating a low positive correlation between the two. Correlation coefficient with PTEN (Entertainment) is 0.345, indicating a low positive correlation between the two. Correlation coefficient with PT (The Intention in the purchase intention) is 0.461, indicating a moderate positive correlation between the two.

Based on the provided Pearson correlation coefficients matrix, we can analyze the correlation between each pair of variables:

Correlation coefficients between PTAT(Attraction)and other variables: Correlation coefficient with PTEN (Entertainment) is 0.480, indicating a moderate positive correlation between the two. Correlation coefficient with PT (The Intention in the purchase intention) is 0.502, indicating a high positive correlation between the two.

Based on the provided Pearson correlation coefficients matrix, we can analyze the correlation between each pair of variables:

Correlation coefficients between PTEN(Entertainment) and other variables: Correlation coefficient with PT (The Intention in the purchase intention) is 0.508, indicating a high positive correlation between the two.

There are positive correlations among PTIA, PTIWOM, PTPDS, PTAT, PTEN and PT (purchase intention), with correlation coefficients ranging from 0.273 to 0.508. Therefore, each of the independent variables can be used in stepwise multiple regression analyses, placing the variables into the model one by one.

From the correlation coefficient and the regression analysis results, there is a certain degree of positive correlation between the purchase intention and each factor. Among them, Attraction and Entertainment have the most significant influence on the purchase intention, which is also in line with the actual situation. Because attractiveness and entertainment are usually one of the main considerations of consumers' purchase decisions, it can effectively promote the promotion of purchase intention.

**Table 5.** The results of the analysis of the regression coefficient Interactivity, Internet Word-of-Mouth, Price discount strength, Attraction and Entertainment affect purchase intention

Model		Coefficients <sup>a</sup>					Collinearity Statistics	
		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Tolerance	VIF
		B	Std. Error	Beta				
1	(Constant)	.969	.178		5.436	.000		
	Interactivity	.041	.040	.046	1.036	.301	.766	1.305
	Internet Word-of-Mouth	.139	.033	.188	4.253	.000	.787	1.270
	Price discount strength	.172	.036	.213	4.755	.000	.765	1.307
	Attraction	.200	.039	.240	5.138	.000	.709	1.410
	Entertainment	.194	.038	.243	5.169	.000	.697	1.434

a. Dependent Variable: PT(purchase intention)

**R<sup>2</sup> =0.428 , \*P< .05**

From Table 5 The results of the analysis of the regression coefficient Interactivity, Internet Word-of-Mouth, Price discount strength, Attraction and Entertainment affect purchase intention.

It was found that independent variable consisted of Interactivity, Internet Word-of-Mouth, Price discount strength, Attraction and Entertainment, Internet Word-of-Mouth, Price discount strength, Attraction and Entertainment, They all have a significance p-value of 0.000, Less than 0.05, Show that the overall regression model is significant, The interactivity corresponds to a t-value of 1.036 and a significance p-value of 0.301, the significance p-value More than 0.05, It means that the regression model was not significant and had no effect on the purchase intention.

The R-squared of the model is 0.428, indicating that Interactivity, Internet Word-of-Mouth, Price discount strength, Attraction and Entertainment can explain 42.8% of the variation in purchase intention(PT).

It was found that:

Interactivity: Its B value is 0.041, the corresponding t value is 1.036, and the significance p value is 0.301, More than 0.05, indicating that interactivity does not have an effect on on purchase intention(PT);

Internet Word-of-Mouth: Its B value is 0.139, the corresponding t value is 4.253, and the significance p value is 0.000, less than 0.05, indicating that internet Word-of-Mouth has a significant impact on purchase intention(PT).

Price discount strength: Its B value is 0.172, the corresponding t value is 4.755, and the significance p value is 0.000, less than 0.05, indicating that price discount strength has a significant impact on purchase intention(PT).

Attraction: Its B value is 0.200, the corresponding t value is 5.138, and the significance p value is 0.000, less than 0.05, indicating that attraction has a significant impact on purchase intention(PT).

Entertainment: Its B value is 0.194, the corresponding t value is 5.169, and the significance p value is 0.000, less than 0.05, indicating that entertainment has a significant impact on purchase intention(PT).

## 5 CONCLUSIONS

Research findings, Internet Word-of-Mouth, Price discount strength, Attraction and entertainment had a positive effect on purchase intention, and this effect was significant. Interactivity does not affect the non-purchase intention. We can also obtain the degree of influence of the respective variables on the dependent variable. The order of the influences is ranked according to the size of the standardized coefficients, Entertainment (.243) > Attractiveness (.240) > Price Discount Intensity (.213) > Internet Word of Mouth (.188) > Interaction Intensity (.046), which means that Entertainment has the greatest influence on purchase intention in this model, followed by Attractiveness, Price Discount Intensity, Online Word of Mouth, and lastly, Interaction Furthermore, this study examined the relationship between independent variables to assess the possibility of collinearity, which refers to the high correlation between independent variables that may lead to inaccurate study results. In this study, the VIF did not exceed 1.5, indicating a low degree of collinearity among subjects. Therefore, the results of this study can be considered unlikely to be biased due to collinearity.

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