WEP Warwick Evans Publishing

International Journal of Social Sciences and Public Administration

ISSN: 3005-9836 (Print), ISSN: 3005-9585 (Online) | Volume 6, Number 1, Year 2025
DOI: https://doi.org/10.62051/ijsspa.v6n1.16
Journal homepage: https://wepub.org/index.php/IJSSPA/index

Empirical Study on the Browsing Behavior of PUGC Content among College Students in Anhui Province: Taking the Bilibili Blogger "MediaStorm" as an Example

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ABSTRACT

As major mainstream video platforms enter the PUGC construction, the creation mode that meets the audience's interests and popularizes scientific knowledge is widely sought after. Under this trend, the academic and industry research on PUGC construction focuses more on economic benefits, business models and other objects, and pays less attention to the factors affecting audience behavior. User feedback is an important part of the interactive model of mass communication. This paper selects college students from Anhui universities as the research group to deeply understand young people's cognition of "MediaStorm", a well-known PUGC creator on bilibili, analyze the factors affecting young people's browsing of PUGC content, and then explore the optimization strategy of the PUGC model, which provides effective methods and tools for the further optimization of the construction of PUGC on the comprehensive video community platform, and also provides a reference for the academic community to conduct in-depth research on PUGC communication.

KEYWORDS

PUGC; Bilibili Blogger; Empirical Research; Optimization Suggestions.

1. RESEARCH BACKGROUND AND SIGNIFICANCE

In the past decade of the booming development of the Internet, online video platforms have become a focus of national entertainment. As problems such as content homogeneity and pan-entertainment have gradually been exposed, and influenced by the upgrading of user needs and technological progress, the User Generated Content (UGC) and Professional Generated Content (PGC) models have merged to form the Professional User Generated Content (PUGC) model. On the one hand, this model has the advantages of UGC such as diversity and personalization, and on the other hand, it also plays the professional and high-quality characteristics of PGC, which is more conducive to the verticalization and personalization of content. Today, PUGC construction is becoming a construction trend of major mainstream video platforms.

As one of the earliest two-dimensional UGC communities in China, bilibili has begun to explore a new PUGC development path since its listing in 2018 [1]. Today, video creation no longer relies solely on platform rewards and user rewards, and "knowledge payment" has become a new breakthrough point. In addition to monetization through advertising cooperation and other means, some creators will also use their own personalized advantages to develop their own professional brands and embed promotion in videos [2], forming a new PUGC content production model, relying on a large fan base to further expand their influence. More and more PUGC creators have completed the transformation of revenue [3], and the PUGC model is constantly improving and changing.

In this context, this paper starts from the user's perspective, taking the bilibili blogger "MediaStorm" as an example, through empirical research, analyzes the browsing behavior and influencing factors of PUGC content, and puts forward targeted optimization suggestions.

2. CURRENT STATUS OF DOMESTIC AND FOREIGN RESEARCH

2.1. Influencing Factors of User Communication Behavior

Regarding communication channels, Xu Lin (2007) pointed out that users' trust in communication media is reflected in the authority, independence and reliability of the media. Myers et al. (2013) emphasized the influence of "opinion leaders" on user communication behavior. They believe that "opinion leaders" are intermediaries between mass media and users, active in the social media environment, and such people play a decisive role in the evaluation and dissemination of information. Dwyer (2015) pointed out that communication and dissemination between users are not only affected by information, but also by sociality. The influence of information is reflected in the need to search for and pay attention to information, while the influence of sociality is reflected in the need for interpersonal relationships and value recognition. Therefore, the factors affecting user communication behavior cover the "5W" communication model and group norms.

2.2. The Role of Users in PUGC Construction

Under the PUGC model where users have the right to speak, Li Yan (2019) believes that how to rely on content to attract the attention of the audience and expand influence in the flood of information has become the primary problem to be solved at present. Ma Qiuhua et al. (2020) emphasized the importance of users in PUGC construction. They believe that the social group created by the media "is a characteristic of having common things, a common sense of emotion, and a characteristic of mutual care." It is "a social group built by people for themselves." Based on this, starting from the user itself, the core is to study the PUGC optimization strategy.

2.3. PUGC Media Communication Optimization Path

The research on the optimization path of PUGC in academia and industry focuses more on the platform business model and profit model, which has certain reference significance for the research of this project. Li Honglin (2021) proposed that bilibili should adhere to the user-centric approach in the PUGC business model and improve user maintenance and operation capabilities. Sun Ding (2021) believed that bilibili should introduce experts and scholars in the field of professional production profit optimization to ensure the authority of knowledge production; and the platform itself must strengthen security and copyright supervision, and improve the classification and review system to ensure the healthy development of the platform's PUGC model.

In summary, the current academic and industry research on PUGC construction focuses more on objects such as economic benefits and business models, while paying less attention to the audience of PUGC content, and there are also fewer studies on PUGC optimization strategies based on the user perspective. Based on this, this paper selects the group of college students in Anhui universities to study the behavior of this group browsing PUGC content in bilibili, and demonstrates the factors that affect this behavior. Combined with the communication characteristics and communication patterns under the background of PUGC trends, high-quality PUGC communication optimization strategies and improvement measures are constructed.

3. AN EMPIRICAL STUDY BASED ON THE BLOGGER “MEDIASTORM” ON BILIBILI

3.1. Survey Subjects and Questionnaire Design

“MediaStorm” is a well-known creator in the digital area of bilibili platform and a typical representative of the PUGC construction of the platform. The account owner is Tim (Pan Tianhong), and the total number of fans on the entire network platform has exceeded 10 million. In the early days, the content published by “MediaStorm” was mainly digital evaluation[4]. Now, it has grown from an amateur college student to a first-class creator in the field of PUGC. In 2017, “MediaStorm” cooperated with manufacturers to develop an affordable photography light, which was enthusiastically sought after by digital consumers. Taking this opportunity, “MediaStorm” paid attention to the personalized needs of video audiences and used its own professional knowledge to develop the brand “STORMCREW”. Implanting promotion in evaluation videos is a new PUGC profit model adopted by “MediaStorm”, which has received widespread attention and imitation. Therefore, this paper selects "MediaStorm" as the research object of this optimization strategy exploration, studies the cognition of college students in Anhui Province on the PUGC paid content production model of this creator, and further analyzes the influencing factors of Anhui college students browsing PUGC content.

This questionnaire survey randomly selected college students in Anhui Province, and a total of 265 questionnaires were distributed, all of which were collected, including 250 valid questionnaires, and the effective recovery rate of the questionnaire was about 94.3%.

In terms of the setting of the questionnaire questions, the questionnaire has 18 questions, of which the 17th question uses the Likert scale, focusing on the investigation of Anhui college students' interest in "MediaStorm", their understanding of "MediaStorm", and their views and suggestions on promoting their own brand "STORMCREW". In terms of the questionnaire distribution channel, the field research method is combined with the questionnaire and field survey, and data analysis is carried out through SPSS to deeply explore the optimization ideas of Xiaogang short video communication effect.

3.2. Questionnaire Reliability Test

In order to verify the credibility of the data collected from the questionnaire, this paper uses a reliability test to conduct a reliability analysis, and the results are as follows:

Table 1. Questionnaire reliability test

Reliability Statistics		
Cronbach Alpha	Cronbach's Alpha based on standardized items	Number of items
.920	.921	20

From the above table, we can find that the alpha coefficient of the scale is 0.920, which is higher than 0.9, indicating that the reliability of this questionnaire scale is extremely high, reaching more than 90%.

Table 2. Item Total Statistics

Item Total Statistics					
	Scaled mean after removing items	Scaled variance after removing terms	Corrected item-total correlation	Squared multiple correlation	Cronbach's Alpha after removing terms
MediaStorm is well-known	72.75	167.344	.589	.550	.916
MediaStorm's evaluation is highly professional	72.97	166.537	.578	.508	.916
MediaStorm is down-to-earth and often interacts with users	73.07	163.991	.659	.504	.915
MediaStorm is objective and fair, and does not carry any personal opinions	72.82	166.568	.627	.559	.915
MediaStorm has great creativity	72.90	166.918	.578	.498	.916
The evaluation videos are well-made and pleasing to the eye	72.64	167.211	.614	.613	.916
The types of evaluation videos are rich and diverse	72.85	166.338	.593	.585	.916
The evaluation videos popularize a lot of new knowledge that I don't know	72.90	165.604	.598	.579	.916
The evaluation videos show product details and are referenceable	72.76	166.609	.594	.584	.916
The test videos are interesting and not boring	72.83	166.325	.579	.539	.916
STORMCREW is affordable	72.97	165.754	.608	.615	.916
STORMCREW has good product quality	73.19	166.611	.534	.557	.917
STORMCREW has a wide range of products	73.30	167.334	.501	.548	.918
STORMCREW products are well-known	73.00	168.024	.524	.571	.918
STORMCREW product design fully considers user needs, and is convenient and practical	73.08	166.310	.582	.583	.916
I think STORMCREW's current promotion methods have increased its popularity	73.03	163.782	.632	.613	.915
STORMCREW's evaluation promotion has made me feel good about the brand	73.23	165.550	.541	.578	.917
STORMCREW's evaluation promotion has made me want to buy products	73.30	164.380	.586	.577	.916
STORMCREW's evaluation promotion has made me feel that the brand attaches great importance to users and has enhanced my loyalty	73.10	165.986	.576	.586	.916
STORMCREW's evaluation promotion has made me feel that the brand is innovative and full of technology	73.20	166.773	.525	.510	.918

From the above table, we can find that the α value of each item of the scale is above 0.9, which means that the reliability of the scale is extremely high, reaching more than 90%.

In summary, the α value of the overall questionnaire scale and each data is above 0.9, the reliability is extremely high, reaching more than 90%, and the measurement effect is excellent, so the next step of analysis can be carried out.

3.3. Factor Model Analysis based on Questionnaire Results

3.3.1. KMO Test and Bartlett Sphericity Test

Table 3. KMO and Bartlett test

KMO and Bartlett's test		
KMO sampling suitability measure.		.918
Bartlett's test of sphericity	Approximate Chi-Square	2809.579
	Degrees of Freedom	190
	Significance	<.001

KMO test and Bartlett's sphericity test are effective ways to test whether the data are suitable for factor analysis. According to the table above, the KMO value is 0.918, which is within the standard range given by Kaiser for factor analysis; the approximate chi-square of Bartlett's sphericity test is 2809.579, which is a relatively large statistical value; the significant The value is less than 0.001, indicating that the data of the scale are suitable for factor analysis.

3.3.2. Extracting Common Factors

Table 4. Total variance explained

Total variance explained									
	Initial eigenvalues			Extracting the sum of squares of loadings			Sum of squares of rotating loads		
Element	total	Percentage of variance	Cumulative %	total	Percentage of variance	Cumulative %	total	Percentage of variance	Cumulative %
1	8.028	40.138	40.138	8.028	40.138	40.138	3.574	17.869	17.869
2	2.263	11.316	51.453	2.263	11.316	51.453	3.513	17.565	35.434
3	1.952	9.761	61.215	1.952	9.761	61.215	3.482	17.412	52.846
4	1.452	7.262	68.477	1.452	7.262	68.477	3.126	15.631	68.477
5	.592	2.959	71.435						
6	.563	2.817	74.252						
7	.521	2.603	76.856						
8	.493	2.466	79.322						
9	.464	2.322	81.644						
10	.456	2.278	83.922						
11	.426	2.129	86.052						
12	.418	2.089	88.141						
13	.382	1.911	90.052						
14	.340	1.698	91.750						
15	.318	1.591	93.341						
16	.298	1.491	94.832						
17	.286	1.431	96.263						
18	.276	1.381	97.644						
19	.262	1.311	98.956						
20	.209	1.044	100.000						
Extraction method: principal component analysis.									

As can be seen from the table above, a total of four common factors were extracted, and the variance contribution rates of each factor were 17.869%, 17.565%, 17.412%, and 15.631%, respectively. The cumulative contribution rate was 68.477%, and the eigenvalues of the first four common factors were greater than 1, indicating that about 70% of the original data information was extracted, and there was less missing information, indicating that the factor analysis was effective.

It can be seen that extracting the first four factors has a significant effect on the original variables.

3.3.3. Factor Loadings

Table 5. Rotated component matrix a

Rotated component matrix a a				
	Element			
	1	2	3	4
The types of evaluation videos are rich and diverse	.794			
The evaluation videos are well-made and pleasing to the eye	.787			
The evaluation videos popularized a lot of new knowledge that I didn't know	.784			
The evaluation videos show product details and are referenceable	.768			
The test videos are interesting and not boring	.764			
STORMCREW products are well-known		.807		
STORMCREW products are rich in variety		.804		
STORMCREW is affordable		.788		
STORMCREW product design fully considers user needs, convenient and practical		.779		
STORMCREW products are of good quality		.776		
STORMCREW's evaluation promotion made me feel good about the brand			.805	
STORMCREW's evaluation promotion made me feel that the brand attaches great importance to users and strengthened my loyalty			.802	
STORMCREW's evaluation promotion made me want to buy products			.787	
STORMCREW's evaluation promotion made me feel that the brand is innovative and full of technology			.770	
I think STORMCREW's current promotion methods have increased its popularity			.743	
MediaStorm is well-known				.782
MediaStorm's evaluation is highly professional				.768
MediaStorm is objective and fair, and does not carry personal opinions				.727
MediaStorm's creativity is very good				.726
MediaStorm is down-to-earth and often interacts with users				.597
Extraction method: principal component analysis. Rotation method: Kaiser normalization varimax method. a				
a. The rotation converged after 5 iterations.				

As shown in the table above, through dimensionality reduction analysis, a total of 4 factors were extracted from the Likert scale. The first factor consists of questions 6, 7, 8, 9, and 10 of the scale, which reflects the respondents' cognition of the presentation of the test video. We named it "evaluation of evaluation content".

The second factor consists of questions 11, 12, 13, 14, and 15 of the scale, which reflects the respondents' cognition of the STORMCREW product in the evaluation video. We named it "evaluation of evaluation object".

The third factor consists of questions 16, 17, 18, 19, and 20 of the scale, which reflects the consumers' feelings after watching the evaluation video. We named it "evaluation of evaluation effect".

The fourth factor consists of questions 1, 2, 3, 4, and 5 of the scale, which reflects the consumers' evaluation of MediaStorm itself. We named it "evaluator evaluation".

3.4. Correlation Analysis based on Factor Model

Table 6. Correlation

Correlation						
		Evaluation content	Evaluation of the test object	Evaluation of test results	Reviewer comments	Would you recommend MediaStorm and its STORMCREW products to your friends and family?
Evaluation of evaluation content	Pearson correlation	1	.000	.000	.000	-.024
	Significance (two-tailed)		1.000	1.000	1.000	.706
	Number of cases	250	250	250	250	250
Evaluation of evaluation object	Pearson correlation	.000	1	.000	.000	-.209**
	Significance (two-tailed)	1.000		1.000	1.000	<.001
	Number of cases	250	250	250	250	250
Evaluation of evaluation effect	Pearson correlation	.000	.000	1	.000	-.174**
	Significance (two-tailed)	1.000	1.000		1.000	.006
	Number of cases	250	250	250	250	250
Evaluation of reviewer	Pearson correlation	.000	.000	.000	1	-.094
	Significance (two-tailed)	1.000	1.000	1.000		.137
	Number of cases	250	250	250	250	250
Will you recommend "MediaStorm" and its STORMCREW product to your friends and family?	Pearson correlation	-.024	-.209**	-.174**	-.094	1
	Significance (two-tailed)	.706	<.001	.006	.137	
	Number of cases	250	250	250	250	250
**. The correlation is significant at the 0.01 level (two-tailed).						

Whether the respondents are willing to recommend "MediaStorm" and its STORMCREW product to their friends and family can reflect the effectiveness of the test video dissemination from the user's perspective. “Willing to recommend” is assigned a value of 1, and “Unwilling to recommend” is assigned a value of 2. The stronger the willingness to recommend, the lower the assigned value. Among the four factors, the higher the evaluation, the higher the value assigned.

As can be seen from the above table, when the variable selected is “evaluation of the evaluation object”, the significance is less than 0.001, indicating that “evaluation of the evaluation object” is correlated with “the willingness of the respondents to recommend MediaStorm and its STORMCREW products to their relatives and friends”, r = -0.209, close to -1, showing a negative correlation.

3.5. Linear Regression Analysis

Table 7. Model summary

Model summary				
Model	R	R-square	Adjusted R-square	Error in standard estimates
1	.209a	.044	.040	.390
a. Predictor variables: (constant), evaluation of the subject				

Table 8. ANOVA a

ANOVA a						
Model		sum of squares	Degrees of Freedom	Mean Square	F	Significance
1	Regression	1.727	1	1.727	11.373	<.001b
	Residuals	37.669	248	.152		
	Total	39.396	249			
a. Dependent variable: Would you recommend "MediaStorm" and its STORMCREW product to your friends and family?						
b. Predictor variables: (constant), evaluation of the subject						

Table 9. Coefficient a

Coefficient a						
Model		Unstandardized coefficients		Standardized coefficient	t	Significance
		B	Standard Error	Beta		
1	(constant)	1.196	.025		48.522	<.001
	Evaluation of the test object	-.083	.025	-.209	-3.372	<.001
a. Dependent variable: Would you recommend "MediaStorm" and its STORMCREW product to your friends and family?						

Based on the conclusion of correlation analysis, we took “evaluation of the evaluation object” as the independent variable and “the willingness of the respondents to recommend MediaStorm and its STORMCREW products to their relatives and friends” as the dependent variable to analyze whether

there is a linear regression relationship between the two. From the above table, it can be seen that the significance is less than 0.001, which indicates that the independent variable has a significant impact on the dependent variable and the two show a significant linear regression relationship.

In summary, the videos created by MediaStorm will select different evaluation objects. The higher the respondents' evaluation of these evaluation objects, the stronger their willingness to recommend MediaStorm and its STORMCREW products to their friends and relatives.

4. CONCLUSIONS AND RECOMMENDATIONS

4.1. Analysis of MediaStorm's 5W Communication Model

According to Lasswell's "5W" communication model, the five dimensions of factors influencing Anhui college students' browsing behavior of MediaStorm PUGC content are analyzed one by one: communicator, communication content, communication channel, recipient and effect feedback.

The first element "Who" refers to the communicator – MediaStorm, a digital self-media account created and operated by Tim. According to the questionnaire data, the account is well-known in the digital field, its evaluation professionalism is highly praised, it has a high credibility as a source among users, and has a strong persuasive effect. In addition, MediaStorm adopts a down-to-earth style, often interacts with users, conducts objective and neutral evaluations, has high user stickiness, and facilitates content output and conversion.

The second element, "Say What," refers to the review videos produced by MediaStorm. Compared with the comprehensive content created by traditional KOLs, these videos have their own unique features in terms of subject matter, innovative thinking, and content format: in terms of subject matter selection, they are more vertical and the types are younger, bringing cutting-edge digital content to the audience. Product evaluation; in terms of innovative thinking, the video is well-made, showing product details from multiple angles, and is highly referenceable; in terms of content form, it focuses on science and education propaganda, but the innovation lies in novelty and fun, and two-way interaction with the audience to explore life together. Not unidirectional output.

The third element "In which channel" refers to the communication medium bilibili. As China's largest ACG community and comprehensive video leading platform, bilibili has a significantly younger user base. At the same time, as a top PUGC creator, with the support of platform traffic, the timeliness of the dissemination of videos produced by MediaStorm has been greatly improved, shortening the time difference between the disseminator and the recipient, effectively meeting the user's personalization and timeliness. need.

The fourth element "To whom" refers to the communication audience. The subjects of this survey are college students in Anhui Province. As members of Generation Z, they have broad interests and are willing to try new things. Judging from user behavior, most users are more interested in digital products and attach importance to evaluating products, evaluation topics and video covers, which puts forward requirements for communicators' topic selection and video production. In addition, from the perspective of users' viewing psychology, their viewing motivation is mainly instrumental satisfaction. They expect to obtain new information and new knowledge from the video, or purchase practical products such as STORMCREW brand brackets and fill lights through reviews. In terms of post-purchase evaluations, they have a relatively satisfactory user experience and give MediaStorm a high rating, which is conducive to brand conversion.

The fifth element "With what effect" refers to the communication effect. According to the questionnaire survey, Stormcrew's evaluation and promotion has increased 62.4% of users' favorability towards the brand, 60% of users have a desire to buy, and 65.2% of users have increased their brand loyalty. Both have a certain positive impact; the higher the respondents' evaluation of the product, the stronger their willingness to recommend it to their relatives and friends.

From the 5W model, we can see that MediaStorm's communicators rely on their professional explanations and pay attention to user feedback. They spread PUGC through social media such as bilibili, and conquer a large number of people who are interested in digital products with their vertical, segmented and professional communication characteristics. However, we should not underestimate the importance of expanding diversified content and continuously developing new products.

4.2. PUGC Optimization Suggestions based on Questionnaire Results

4.2.1. Combining Personalization with Specialization to Maintain One's Own Positioning

At present, there is a problem of "establishing personalities" in the PUGC field, which greatly reduces the audience's trust: some content creators either use preaching expressions, or publish some eye-catching and meaningless "watered-down content" in order to follow hot topics. , which makes the audience have a bad viewing experience and lose trust.

MediaStorm is already one of the most influential creators in the PUGC field of bilibili. In addition to continuously outputting high-quality creative content, it also needs to maintain a clear positioning to meet the more segmented needs of users: continue to maintain personalization and professionalism The creative style combines the use of Internet buzzwords[5] and popularizes professional knowledge in the digital field in an easy-to-understand way, avoiding preaching, old-fashioned or exaggerated expressions that attract attention.

4.2.2. Explore Diversified Evaluation Objects and Presentation Methods

According to the questionnaire, the products that users like are the primary reason that drives the audience to actively browse videos; factor analysis and linear regression analysis also show the importance of the evaluation object. It can be seen that MediaStorm needs to evaluate more types of digital products, while continuously expanding the product categories of its own brand - STORMCREW, to meet the needs of different groups of people.

It should be noted that due to its own attributes, the profit model of PUGC is generally traffic monetization. Inserting advertising promotion into the evaluation will inevitably reduce the persuasiveness of professional popularization and cause user disgust[6]. Therefore, in addition to testing products objectively and fairly and promoting them appropriately, it is also necessary to explore more diverse presentation methods, such as inviting fans to participate in evaluations, to ensure the authenticity of the evaluations and further deepen interaction with the audience.

4.2.3. Ensure Product Quality, Pay Attention to Audience Feedback, and Continuously Improve Reputation

Audiences learn information by watching videos and ultimately choose to buy. The determining factor is the quality of the product, and their user experience will also affect their evaluation of MediaStorm. From the linear regression analysis, we can see that the higher the audience's evaluation of the product, the greater their willingness to recommend it to people around them. Therefore, MediaStorm needs to do a good job of checking before the evaluation, and control the product quality through product research, advance testing, etc. [7]; when promoting its own STORMCREW brand, it must continue to listen to consumer suggestions, and do regular follow-up and customer service. , and constantly improve the corresponding functions and experiences, so as to enhance the audience's desire to buy, improve its own reputation and further expand its influence.

ACKNOWLEDGEMENTS

Funded by the Innovation and Entrepreneurship Training Program for College Students of Anhui University of Finance and Economics (202310378076).

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