A STUDY OF THE INFLUENCE OF CONTENT-BASED MOBILE SOCIAL MEDIA USER PERCEPTION ON USER STICKINESS

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Abstract: Content-based mobile social media is a social platform with mobile smart terminal devices as the carrier, user original content as the main production mode, and graphic or short video as the information transmission mode. With the innovation of mobile terminal application technology, smart terminals have been developing rapidly. Users' time is gradually fragmented, and users' information needs are more personalized, which also promotes the prosperous development of content-based mobile social media. Currently, the volume of mobile social media users is in the saturation period after the surge, and the match between user browsing behavior and platform content is the key to the success of mobile social media. Social media operators must take advantage of new technologies such as the Internet and big data to dig deeper into the user's behavioral path, solve the user's pain points and provide a quality experience. The ultimate landing point of the platform is to enhance users' loyalty and stickiness to the platform. However, at this stage, the homogenization of social media mobile terminals is becoming increasingly serious, and although the platform's novel function modules are emerging, the function layout is relatively hidden and the operation interface is complicated, and there are also some social platforms that do not pay enough attention to the security of user information, and there are frequent incidents of user information leakage, which may lead to the loss of users. Therefore, this study takes content-based mobile social media as the research object to explore the influence of user perception on user stickiness.

This study builds a theoretical research model for this study based on the information system success model and combines the psychological state of content-based mobile social media users. Starting from the perspective of user perception and combining with the application context of content-based mobile social media, this study categorizes user perception into system quality, information quality, service quality, utilitarian value and hedonic value, and explores the influence of user perception on user stickiness through empirical analysis and draws the corresponding conclusions.

This study refers to existing literature research and mature scales, integrates the actual scenarios of content-based mobile social media to improve the formation of the final questionnaire, and distributes and collects them through online and offline channels, with a total of 770 distributed and 659 valid questionnaires, with a questionnaire validity rate of 85.6%. In terms of data analysis, the statistical

analysis tool SPSS was first used to carry out the preliminary reliability and validity test, descriptive statistical analysis and regression analysis between variables. The results of the study are as follows: 1. Improvement of system quality is positively correlated with user stickiness. 2. Improvement of information quality is positively correlated with user stickiness. 3. High quality service experience is positively correlated with user stickiness. 4. Hedonic value that users get from social media platforms is positively correlated with user stickiness. 5. Practical value that users get from social media platforms is positively correlated with user stickiness.

Keywords: Information System Success Model, Content-Based Mobile Social Media, User Perception, User Stickiness

Introduction

In recent years, the mobile internet industry has maintained strong growth momentum, driven by digitalization which has accelerated the pace of life and streamlined information delivery. In this environment, users' time has become increasingly fragmented, prompting the rise of content-oriented mobile social media as a new mode of information dissemination. Traditional information sharing platforms such as television, PCs, and newspapers no longer meet the needs of most users. With instant messaging mobile social products like WeChat and QQ facing traffic saturation, the emergence of new-generation information technologies like big data and artificial intelligence has become the driving force behind the iteration of mobile social products, particularly those centered around content services known as "content-oriented mobile social media."

Platforms like Douyin (TikTok) and Kuaishou (Kwai) represent short-video content social products, where users invest significantly more time, effort, and money compared to traditional social media platforms. Concurrently, the full coverage of 4G communication networks and the development of 5G technology have created a favorable environment for social media. With widespread adoption of smart terminal technologies, content-oriented mobile social media has experienced rapid development, resulting in exponential growth in user numbers. Currently, China has over 700 million short-video users, comprising more than half of all internet users, making it the second largest user group after internet communication applications.

Content-oriented mobile social media has become the primary means for users to access information today. Users not only utilize platform-integrated search engines to find desired information but also rely on precise recommendation systems to receive highly relevant content, thus satisfying their diverse information needs. Users effectively utilize fragmented time to quickly grasp trends and directions of the era, and engage in deep learning through shared educational content on these platforms. For content-oriented mobile social media operators, understanding user profiles through data on user

searches and viewing histories is crucial. This deeper understanding allows for clearer insights into user needs, facilitating the optimization of product functionalities and enhancing competitive edge.

Content-oriented mobile social media is a product of internet development, aligning with the trends of the internet era. Currently, hundreds of content-oriented mobile social media applications exist in the Chinese market. However, issues such as varying product quality and homogeneity of functionalities are prominent. Moreover, the user base of social media platforms is approaching saturation, intensifying competition among major platforms for market share and user engagement. Operators must continuously enhance data recommendation systems to gain precise insights into their platform users.

Given the current stage of the social media industry, operators of content-oriented mobile social media platforms should not solely focus on acquiring new users but also prioritize user retention. Enhancing service quality to increase user visit frequency and duration is essential. Therefore, identifying the factors influencing user stickiness and understanding their mechanisms is crucial for content-oriented mobile social media operators to enhance their competitiveness.

Research Objectives

1. To examine the impact of system quality on user stickiness.
2. To examine the influence of information quality on user stickiness.
3. To examine how service quality affects user stickiness.
4. To examine the impact of hedonic value on user stickiness.
5. To examine the influence of utilitarian value on user stickiness.

Literature Review

Social Media

With the advent of the internet era, social media has shown a robust upward development trend, carrying massive information that has become the main content people browse on the internet. O'Reilly Media (2007) emphasized the importance of Web 2.0, the second generation of web-based services aimed at enhancing online collaboration and promoting information distribution among users. As a technological framework, Web 2.0 encompasses all connected devices, including applications and update services. Zanamwe and Rupere (2013) regarded social media as a special innovation of Web 2.0 technology, supporting social and online networking through various means such as audio, video, text, and images. Mohammed (2010) considered social media as a network system composed of websites and applications that enable individuals to communicate with each other. Boyd and Ellison (2007) defined social media as web-based services where individuals can create information profiles within specific systems of the service, which can be shared with everyone or only with designated users. People

with internet access can easily access social media through electronic devices, allowing individuals to connect with others via this online platform at home, at work, or while traveling. Davis, Summers, and Miller (2012) defined social media as web-based mobile applications that allow individuals and institutions to communicate, create, participate in, and share new or existing user-generated content in various ways in a digital environment. This definition implies that social media has distinct social characteristics and low entry barriers, breaking the monopoly of traditional media. The most notable difference between social media and traditional media is in content creation rights: social media users are not only disseminators of content but also creators. Social media users can quickly generate content and publish it in various ways to their social circles for other users to read, interact with, and disseminate using computers and mobile devices in a networked environment.

From the above research summary, it can be seen that scholars initially focused their research on social media on information sharing, believing that social media is a medium for interaction between people. In later developments, the functions of social media gradually expanded, showing significant differences from traditional media, particularly in the aspect of content creation rights. Social media allows users to freely exchange opinions on the platform, express their views on different products and services, and integrate user-generated content into the platform's online business transactions, participating throughout the process. The diversified functions of the platform better listen to and meet user needs, adjusting their preferences as needed, creating preconditions for later mobile social media.

User Perception Theory

User perception is a concept within sociology, subdivided into different levels depending on the research context. Therefore, it is necessary to first provide a basic overview and literature review of user perception theory, further integrating known related studies to outline the levels of user perception. This will facilitate the analysis of research on user perception in the online environment, supporting theoretical research.

User perception theory originates from sociology, referring to the intuitive understanding formed by individuals after secondary processing of objective objects by the brain upon receiving the information. Garrett noted that in the internet environment, user perception is the immediate and genuine perception formed by individuals during interaction with various media platforms. It encompasses users' overall feelings towards platforms, products, information, and services, shaped by the interaction of personal characteristics (emotions, needs, tendencies, etc.), system functionalities, and specific environments (Garrett, 2010). Zeithaml's research described user perception as consumers' overall evaluation of received content and various factors determining product utility (Zeithaml, 2000). Shao Shuai suggested that user perception attributes include user experience and user attitude, where user experience focuses on interactions between individuals and products, as well as emotional responses generated by interactions (Shuai, 2015). Konstantakis further categorized user perception into

three levels of indicators, emphasizing their positive role in promoting users' active use (Konstantakis, 2018).

Due to different research perspectives on this concept, researchers have varied in their division of user perception levels, focusing primarily on technical experience, service experience, and sensory experience. For example, Man Ford emphasized the impact of non-instrumental and instrumental factors on user perception, where users primarily perceive effectiveness and pleasure (Ford, 2012). Yoon viewed user perception as composed of three parts: product visualization factors, interaction, and combinations (Yoon, 2013). Kubat argued that user perception is mainly composed of user psychology, product performance, and content perception (Kubat, 2016). This paper further organizes the dimensions of user perception in the field of online social media.

User Stickiness

User stickiness is a psychological intention of users. According to the research purpose of this paper, domestic and foreign scholars' studies on user stickiness are reviewed, defining the concept and exploring its influencing factors.

In the online environment, user stickiness encourages users to stay on a webpage longer, browse more pages, and frequently return to a designated website rather than navigate to other sites. User stickiness is a psychological activity that encourages sustained engagement, and this psychological dependency can further manifest into behavior, varying from normal usage to addiction. User stickiness represents the ability to retain users on a platform, ensuring frequent usage. Many scholars have studied website user stickiness and provided different definitions of the concept. Li (2017) describes stickiness from the user's perspective, suggesting that despite environmental and market behaviors that could lead users to switch to alternative sites, users are more likely to visit and use their preferred site, which defines stickiness. Lin (2018) defines user stickiness as the willingness of users to repeatedly visit and continue using their preferred website; longer stays and frequent visits indicate higher user stickiness. Wu Xuanying (2019) conducted a survey on mobile game users and proposed that user stickiness refers to the behavior and intention of users to continuously use a specific website. Building on this, Zhang Meihua (2020) innovatively proposes that user stickiness involves users continuing to use and recommending an application to others.

Information Systems Success Model

With the rise of social media and the rapid development of mobile terminals, users' information needs are becoming increasingly personalized and diverse. Mobile social media is currently experiencing a period of vigorous growth. Social media, being intangible products, rely heavily on users' overall perception and experience when receiving services. Consequently, an increasing number of scholars are focusing on user perception to uncover the pathways influencing user stickiness on social media platforms (Chen & Li, 2020; Chu & Kim, 2011). Research on user stickiness in mobile social

media has predominantly centered on perceived value and perceived quality. However, studies that combine these two aspects and specifically target content-oriented mobile social media are relatively scarce. Furthermore, most research on content-oriented mobile social media tends to focus on a single platform or a specific category of platforms. Considering the current diversity of internet products and the serious issue of functional module homogenization among various content-oriented mobile social media, it is both important and meaningful to further expand and enrich research on this topic (Hajli et al., 2017; Lin et al., 2015).

User stickiness is a psychological intention of users. When the research object is an internet product, user stickiness can more accurately analyze user intentions compared to user purchase and consumption behavior (Bandura, 1988; Shannon & Weaver, 1949). With the development of content-oriented social media, the influencing factors of user stickiness have gradually incorporated psychological elements such as flow experience. However, studies that introduce moderating variables are relatively few. Even though the financial switching cost of mobile products is low, users still need to consider switching costs due to user habits and information differences between products. While existing research indicates that switching costs have a moderating effect on the impact of user perception on user stickiness, whether this moderating effect remains in the social media context and whether switching costs can moderate the impact of user satisfaction on user stickiness still require further study (Jaakkola & Alexander, 2014; Jin & Cheung, 2008).

These studies demonstrate that the Information Systems Success Model is reasonably applicable in general online information and communication contexts and has been applied to platforms like Weibo and WeChat. Content-oriented mobile social media, being a type of management information system, also directly affects users' sensory experiences and usage perceptions. Therefore, applying the Information Systems Success Model to content-oriented mobile social media is scientifically valid. The few existing studies on content-oriented mobile social media are mainly based on models like the Expectation Confirmation Model, perceived value theory, and the Technology Acceptance Model. Applying the Information Systems Success Model to this context is innovative. Therefore, this paper constructs a theoretical model of the influence pathway of user perception on user stickiness in the social media environment based on the Information Systems Success Model.

Conceptual Framework

This study is based on the information system success model, integrating user perception theory and flow experience theory to establish a conceptual framework. In this framework, the independent variables are system quality, information quality, service quality, utilitarian value, and hedonic value; the dependent variable is user stickiness.
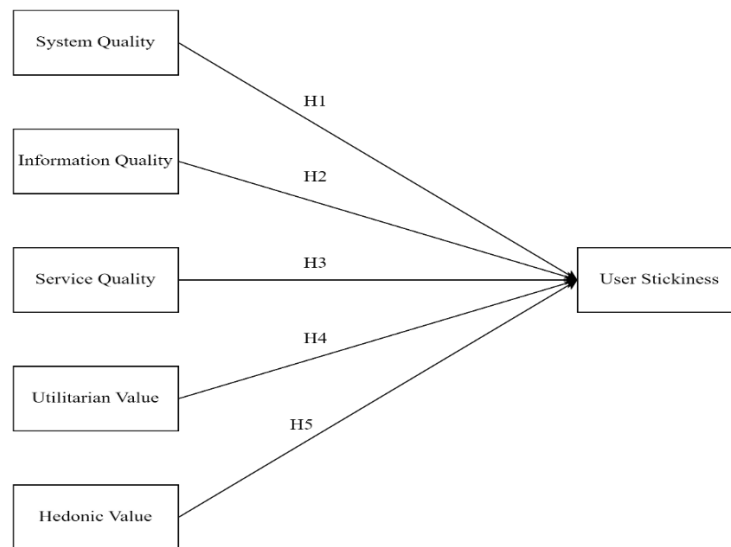
Picture 1: Conceptual Framework

Research Hypothesis

        H1: System quality positively influences user stickiness.

        H2: Information quality positively influences user stickiness.

        H3: Service quality positively influences user stickiness.

        H4: Hedonic value positively influences user stickiness.

        H5: Utilitarian value positively influences user stickiness.

Methodology

        This study collects data through a questionnaire survey. To accurately and reasonably design items that reflect the variables involved in the research, the questionnaire design strictly adheres to the required standards and procedures. This ensures effective measurement of the variables and enhances the explanatory power of the model. The formal questionnaire was distributed through both on-campus surveys and online platforms for data collection, followed by subsequent analysis and model validation.

        Since this study investigates the impact of user perception on platform user stickiness in content-based mobile social media, it is crucial to understand and have experience with content-based mobile social media. Therefore, the initial section of the questionnaire, which collects basic personal information, includes a question about whether the respondent has experience using content-based mobile social media. Valid data is only generated from respondents with such experience. To reduce confusion about certain items, some conceptual explanations were included in the questionnaire design.

Results

        The overall Cronbach's Alpha value for the survey questionnaire, as shown in Table 1, is

0.930, indicating excellent internal consistency reliability of the scales used in this study.

Table 1: Results of Reliability Analysis

Number of questions	Cronbach 's α
28	0.930

Table 2: Results of Reliability Analysis for Each Variable

Variable	Number of questions	Cronbach 's α
System Quality	5	0.847
Information Quality	5	0864
Service Quality	5	0.888
Utilitarian Value	4	0.854
Hedonic Value	4	0.835
User Stickiness	5	0.880

The Cronbach's Alpha values for each variable's scale were measured, as detailed in Table 2. Specifically, the α values for system quality, information quality, service quality, utility value, hedonic value, and user stickiness were 0.847, 0.864, 0.888, 0.854, 0.835, and 0.880, respectively. It can be observed that all α values for the scales in this study are above 0.7, indicating high reliability of the scales for each variable in this study.

The data were subjected to a discriminatory process of suitability for factor analysis and the results are shown in Table 3.

Table 3: KMO and Bartlett's Test[a]

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		0.924
Bartlett's Test of Sphericity	Approx. Chi-Square	14456.179
	df	780
	Sig.	0.000

From Table 4, the overall KMO value of the questionnaire is 0.924 > 0.9 and the Bartlett's test Sig value is 0.000. this indicates that the scale is suitable for factor analysis and can be tested in the next step.

Table 4: Descriptive Statistics Analysis of Valid Sample Information

Variable	Group	Number	Percentage
Gender	Male	282	42.8
	Female	377	57.2
Age	18 years and under	20	3.0
	18-25 years	378	57.4
	26-30 years	199	30.2
	Above 30 years	62	9.4

Occupation	Student	251	38.1
	Government/institution staff	66	10.0
	Enterprise staff	217	32.9
	Self-employed	78	11.8
	Freelancer	47	7.1
Education	High school/technical secondary school and below	49	7.4
	College	102	15.5
	Undergraduate	403	61.2
	Master	97	14.7
	PhD and above	8	1.2

In this study, SPSS was used to validate the data for convergent validity by first doing a validated factor analysis of all latent variables and the results are shown in Table 5.

Table 5: Results of Convergent Validity Analysis

Variable	No.	Factor Loading (λ)	CR	AVE
System Quality	1	0.703		
	2	0.807		
	3	0.884		
	4	0.639		
	5	0.732		
Information Quality	6	0.638	0.846	0.579
	7	0.794		
	8	0.763		
	9	0.817		
	10	0.751		
Service Quality	11	0.879	0.897	0.743
	12	0.790		
	13	0.786		
	14	0.641		
	15	0.846		
Utilitarian Value	16	0.778	0.922	0.664
	17	0.802		
	18	0.693		
	19	0.842		
Hedonic Value	20	0.724	0.859	0.605
	21	0.884		
	22	0.667		
	23	0.725		
User Stickiness	24	0.678	0.882	0.601
	25	0.785		
	26	0.859		
	27	0.755		
	28	0.788		

From the above table, it can be seen that the CR of system quality is 0.869 and the AVE is 0.574, the CR of information quality is 0.868 and the AVE is 0.570, the CR of service quality is 0.893

and the AVE is 0.628, the CR of utility value is 0.861 and the AVE is 0.609, the CR of hedonic value is 0.839 and the AVE is 0.569, and the CR of user stickiness is 0.882 and the AVE is 0.601. All CR values are greater than 0.7 standard and all AVEs are greater than 0.5 standard. All CRs are greater than the 0.7 criterion and all AVEs are greater than the 0.5 criterion.

As shown in Table 6, the AVE square root of each variable is greater than the corresponding inter-variable correlation coefficients, thus the model in this study has good discriminant validity among the variables.

Table 6: Correlations

	System Quality	Information Quality	Service Quality	Utilitarian Value	Hedonic Value	User Stickiness
System Quality	0.758					
Information Quality	0.335**	0.755				
Service Quality	0.224**	0.247**	0.792			
Utilitarian Value	0.190**	0.202**	0.150**	0.780		
Hedonic Value	0.127**	0.458**	0.181**	0.289**	0.554	
User Stickiness	0.410**	0.469**	0.417**	0.388**	0.334**	0.775
Note: **Significantly correlated at the 0.01 level (bilateral).						

Discussion

This study starts from the perspective of user perception, based on the theory of information system success model, combines the characteristics of content-based mobile social media in the social network environment, and investigates the influence mechanism of user perception on user stickiness of content-based mobile social media. Through the empirical analysis method, 659 valid samples were collected with the help of questionnaire star to verify the proposed research hypotheses.

Conclusions

Based on the results of data analysis, the specific conclusions are as follows: System quality, information quality, service quality, utility value and hedonic value have a direct effect on user stickiness and are positively influencing the relationship, which is consistent with the hypothesis before the study, verifying our analysis of the relationship between user perception and user stickiness at the theoretical level, in which the greater degree of influence is the quality of the service, and with the increase in the time and number of times the user uses, the user has a greater influence on the platform's stability, convenience and information matching degree is higher, the platform can accurately match the user's needs, the user can conveniently obtain the required information, this two-way interaction will attract users to continue to use the media, and personalized services are more likely to increase user loyalty.

Considering the positive effects of system quality, information quality, service quality, hedonic

value, and utilitarian value on user stickiness, future research can explore several directions. Firstly, studies can delve into how these factors operate across different industries and markets, as well as their interactions to enhance user stickiness. Secondly, research can focus on how technological innovations can improve system quality and how these innovations affect user experience and stickiness. Additionally, researchers can examine specific aspects of information quality such as accuracy, timeliness, and relevance, and how they individually or collectively impact user stickiness. Studies on service quality can concentrate on improvements in customer support and personalized services. Regarding hedonic value, future research can explore how gamification elements and user interface design enhance user enjoyment and engagement. Lastly, for utilitarian value, research can evaluate how different user groups assess the usefulness of products or services based on their goals and needs. Through these research directions, we can better understand and enhance user stickiness, thereby providing strategic recommendations to businesses to strengthen their market competitiveness.

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