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

XUE KAIYUAN
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This Independent Study has been Approved as a Partial Fulfillment of the Requirements for the Degree of Master of Business Administration

Advisor.....
(Dr. Zhang Li)

Date: 24 / 1 / 2025

.....
(Associate Professor Dr. Jomphong Mongkhonvanit)
Dean, Graduate School of Business

Date 15 / 01 / 2568

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By: Xue Kaiyuan

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Advisor: .....

(Dr. Zhang Li)

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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. 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 took content-based mobile social media as the research subject to explore the influence of user perception on user stickiness. A theoretical research model based on the information system success model was built and combined with the psychological state of the users of content-based mobile social media. Starting from the perspective of user perception and the application context of content-based mobile social media, this study categorized user perception into system quality, information quality, service quality, utilitarian value and hedonic value, and explored the influence of user perception on user stickiness through empirical analysis.

This study adopted the quantitative method, using a questionnaire survey. Questionnaires were distributed and collected through online and offline channels, with a total of 770 distributed and 659 valid questionnaires, with a response 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 tests, descriptive statistical analysis and regression analysis between variables. The results of the study indicate that improvement of system quality, improvement of information quality, high quality service experience, hedonic value and utilitarian value that users get from social media platforms are all positively correlated with user stickiness.

Keywords: information system success model, content-based mobile social media, user perception, user stickiness

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XUE KAIYUAN

DECLARATION

I, XUE KAIYUAN, hereby certify that the work embodied in this independent study entitled "A STUDY OF THE INFLUENCE OF USER PERCEPTION ON USER STICKINESS IN CONTENT-BASED MOBILE SOCIAL MEDIA" is result of original research and has not been submitted for a higher degree to any other university or institution.

XUE KAIYUAN

(XUE KAIYUAN)

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Chapter 1 Introduction

1.1 Background of the Study

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 (Yang et al., 2022). 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 (Zhou, 2021). Traditional information sharing platforms such as television, PCs, and newspapers no longer meet the needs of most users (Li, 2020). 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 driven the evolution of mobile social products, particularly those centered around content services known as "content-oriented mobile social media" (Chen, 2023).

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 (Chen, 2023; Zhou, 2021). Concurrently, the full coverage of 4G communication networks and the development of 5G technology have created a favorable environment for social media (Li, 2020). 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 (Yang et al., 2022).

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 (Huang & Wu, 2023). 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 (Zhou, 2021). For content-oriented mobile social media operators, understanding user profiles through data on user searches and viewing histories is crucial (Chen, 2023). This deeper understanding allows for clearer insights into user needs, facilitating the optimization of product functionalities and enhancing competitive edge (Yang et al., 2022).

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 (Zhou, 2021). Moreover, the user base of social media platforms is approaching saturation, intensifying competition among major platforms for market share and user engagement (Huang & Wu, 2023). Operators must continuously enhance data recommendation systems to gain precise insights into their platform users (Yang et al., 2022).

1.2 Problems of the Study

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 their mechanisms is crucial for content-oriented mobile social media operators to enhance their competitiveness.

1.3 Objectives of the Study

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

1.4 Scope of the Study

Based on the information system success model, this study identified system quality, information quality, service quality, hedonic value, utilitarian value, and user stickiness, and delves into the impact of each basic and potential variable on user stickiness. The value of content-based mobile social media was analysed from the user's perspective. The research methodology was determined through the literature review, and the detailed steps of designing relevant scales and data analysis were carried out based on the objectives of this study.

1.5 Significance of the Study

From a theoretical perspective, this study aims to supplement existing consumer behavior theories by examining user stickiness through the subjective lens of user

perception. By reviewing current scholarly research, it seeks to identify key factors influencing user stickiness in content-oriented mobile social media. Additionally, the study adopts the Information Systems Success Model to establish foundational research variables. It integrates platform attributes and user emotions characteristic of content-oriented mobile social media, incorporating other sociological and psychological variables from the perspective of user perception into the research model. The goal is to construct a more comprehensive model of user stickiness mechanisms, which provides valuable theoretical guidance for content-oriented mobile social media operators to conduct various operational activities and contributes to the overall development of the social media industry.

From a practical standpoint, user stickiness plays a crucial role in the development of content-oriented mobile social media. This study conducts comparative analyses of several domestic content-oriented mobile social media platforms to investigate key factors influencing user stickiness. It explores how the experiential value provided by platforms can meet user expectations of product value. Grounded in user perception, the study empirically analyzes the rationality of the user stickiness model. The findings and conclusions offer valuable reference suggestions for content-oriented mobile social media platforms in formulating and implementing operational strategies, enhancing platform competitiveness and performance based on user-perceived quality and value. Moreover, this study holds significant practical implications for promoting standardization across the social media industry.

Chapter 2 Literature Review

2.1 Introduction

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, as intangible products, rely heavily on the overall perception and experience of users 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. 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.

2.2 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 (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. 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 et al. (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 review, 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.

2.1.1 Mobile Social Media

With the rapid development of intelligent terminals, mobile applications have become an important product of social media. Although mobile social media has not been deeply integrated into people's daily lives for a long time, the number of users has now reached 700 million. The penetration rate of mobile social media has significantly revolutionized interpersonal interactions in the virtual world. Mobile social media, also known as mobile social applications, refer to mobile applications with social functions developed from social networking sites. Early mobile social media was primarily designed for mobile devices, emphasizing user mobility in product design, typically based on location-based services: providing information services to users based on their physical location (Kaplan & Haenlein, 2010).

The earliest commercially developed mobile social media was Japan's Lovegety, a standalone mobile device that would emit a beep when it was within 5 meters of another device. Lovegety had two versions: "Pink Girl" and "Blue Boy," each with three function settings: Let's Chat, Let's Sing, and Let's Date. If both users were in the same function state, indicating mutual interest, the devices would exchange user information and facilitate social interaction (chatting, singing, or dating) (Ito et al., 2005). Lovegety allowed users to interact with others via a mobile device, highlighting its interactivity; it placed no specific restrictions on user interactions as long as they were within 5 meters of each other, emphasizing mobility; and it ensured privacy by not disclosing personal identity information during the exchange of information (Ito et al., 2005).

Lovegety was undoubtedly a typical representative of early mobile social media. Later, more people accessed social media through mobile devices, such as cross-platform social media like Twitter and Facebook. These mobile social media did not necessarily provide location-aware services; as long as users accessed the media on mobile devices, the media could reach users and provide services in various ways. This is how mobile social media now demonstrate their mobility (Smith, 2019).

Therefore, early mobile social media focused more on location-based services. In later developments, they gradually broke through the limitations of location services. As long as users could access the media on mobile devices, services could be provided, creating the premise for the development of content-based mobile social media (Kaplan & Haenlein, 2010).

2.1.2 Content-based Mobile Social Media

Current mobile social media are online platforms based on user groups, where users can generate original content and related files, interact with others, invite others to access their content, and transmit real-time messages through various means. Mobile social media uses the internet as a medium to provide online communication environments, offering individuals various forms of entertainment such as watching movies, enjoying online music, playing online games, and browsing the latest popular news. However, each mobile social media platform has its own focus, evident from their respective slogans. For instance, QQ's slogan is "Every day, happy in communication," while Douyin's slogan is "Record the beauty of life." The former primarily focuses on instant messaging and personal information display, whereas the latter focuses on information sharing.

Functional types are referred to as "self-media," where content types include "self-media + creative works." "Self-media" primarily consists of individual media, with platforms such as Sina Weibo, WeChat, QQ, Baidu Tieba, NetEase, and Sohu. Content-based types refer to "self-media + creative works," where individuals or organizations freely publish dynamic videos and other works on the platform as their primary social mode. Platforms in this category include Douyin and ZAO.

Communication-based mobile social media aims to directly connect people, while content-based mobile social media serves dual functions of providing content services and social interaction. Content services mainly include text, images, audio, video, and their combinations. Compared to other communication-based social media, content-based mobile social media uses mobile terminals as carriers to meet user information and content needs. It establishes social relationships based on content services and

achieves social goals through online user identification and information dissemination technologies.

Therefore, contemporary content-based mobile social media platforms use mobile smart terminal devices as carriers, with user-generated content as the primary production method, and utilize image-text and short video formats as dissemination methods for social interaction.

2.3 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.

The 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 (2010) 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. Zeithaml's (2000) research described user perception as consumers' overall evaluation of received content and various factors determining product utility. Shuai (2015) 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. Konstantakis (2018) further categorized user perception into three levels of indicators, emphasizing their positive role in promoting users' active use.

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, Ford (2012) emphasized the impact of non-instrumental and instrumental factors on user perception, where users primarily perceive effectiveness and pleasure. Yoon (2013) viewed user perception as composed of three parts: product visualization factors, interaction, and combinations. Kubat (2016) argued that user perception is mainly composed of user psychology,

product performance, and content perception. This paper further organizes the dimensions of user perception in the field of online social media.

Based on the research of the aforementioned scholars and considering the social media environment, user perception refers to the comprehensive feelings of users towards the functional effects and service outcomes of using social media, formed directly through various senses or indirectly through mental processes.

User perception theory is mostly applied to studies on user behavioral intentions in the online environment. Previous research in e-commerce environments has found that perceived value increases users' positive word-of-mouth intentions (Shaikh, 2017). Wirtz (2018) highlighted perceived value as one of the most important drivers of user engagement intentions. Verhagen (2014) suggested that perceived socialness and hedonism significantly influence users' participation intentions in virtual environments. Carlson (2019) found that the experiential value of brand pages in mobile social media positively impacts user engagement. In the context of travel applications, Fang (2016) similarly confirmed a positive correlation between perceived benefits and user participation intentions. Chiu (2011) studied the relationship between perceived usefulness of online educational websites, website interface design usability, and user stickiness. Huang (2013), based on Means-End Chain Theory, established a model of the impact mechanism of information dissemination on user stickiness, exploring the mediating role of perceived value in the information dissemination path.

Some scholars have also studied consumer behavior from the perspective of perceived product quality. Kim (2009) argued that perceived quality is a cognitive factor affecting individual purchase behavior regardless of the product. Sebastianelli (2015) found no gender differences between online browsing and online purchasing behaviors, but compared to men, women pay more attention to product quality when purchasing products. Rares (2017) pointed out that perceived quality significantly influences whether users will make a purchase. Khattak and Shah (2012) further studied consumer behavior in developing countries, noting that product quality and consumer attitudes influence non-local products. Hoch and Banegi (2014) conducted a survey and found that products providing high-quality services positively influence user behavior. Fu (2016), based on customer value theory, constructed a model of mobile application user stickiness, exploring the impact of perceived quality, immersive experience, habits, and subjective norms on user stickiness.

Through the research of multiple scholars, it can be found that in the field of mobile media, with the expansion of application scenarios, the levels of user perception are further subdivided, and user perception is the prerequisite basis for behavioral

intentions. The impact path of user perception becomes richer with the expansion of application scenarios.

2.4 User Stickiness

User stickiness is a psychological intention of users. According to the research purpose of this study, 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) described 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) defined 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 (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 (2020) innovatively proposed that user stickiness involves users continuing to use and recommending an application to others.

Based on the above analysis, user stickiness refers to a psychological perception that users form implicitly while using a product, primarily characterized by preference for the product, sustained usage behavior, and loyalty. This loyalty remains unaffected and uninterrupted by external factors.

Various factors influence user stickiness in internet media, as early as 1988 Bandura explored the relationship between user stickiness and blog quality (content quality, system governance, and environmental quality). Subsequent research has mainly focused on analyzing key factors influencing user stickiness on e-commerce websites, often from the perspective of website attributes. For instance, Liu and Arnett (2000) found that the success of e-commerce transactions is related to the amount of information provided by the platform, and overall service quality throughout the process is a critical factor influencing transaction success. Jahn and Kunz (2012) also identified that the continued usage intention of social network users is associated with

content motivation, relationship motivation, and self-directed motivation. Lin et al. (2015) suggested that system quality of websites and blogs can enhance users' intention to revisit, while they also found that content and context significantly affect user loyalty, highlighting the need for administrators to optimize scenarios and interfaces. Lin and Lin (2018) further indicated that the more information users receive from website pushes, the stronger their stickiness, with content quality being a key factor influencing whether users will continue to use the website. Lu and Lee (2019) confirmed the role of personal cognitive needs and social factors (social relationships) in user stickiness.

In addition to website attributes, internet user characteristics also influence user stickiness. Vivek and Zhang (2011) identified three dimensions of user characteristics: perceived involvement, enthusiasm, and social interaction. Jaakkola and Alexander (2014) found that users with different levels of cognitive participation in CSNs may derive different values, including acquiring news and products using skills, perceiving pleasant experiences, and gaining a sense of belonging and identity. Yu (2016) pointed out that satisfaction is closely related to users' organized cognitive values, with hedonic value having the strongest impact. Zhang (2017) further discovered that conscious participation, enthusiasm, and social interaction all have direct and positive effects on hedonic value and social value, thereby further influencing internet user stickiness. Wang (2013) evaluated the stickiness intention of group-buying websites, confirming that trust is one of the factors influencing user stickiness, and relationship commitment has a significant positive effect on stickiness intention.

By reviewing the literature, it is evident that factors influencing user stickiness encompass multiple aspects. Besides website attributes such as content quality, user characteristics such as cognitive value, interaction, and personality also significantly impact user stickiness. Moreover, studies directly indicate that hedonic value plays a positively promoting role in user stickiness, laying a solid foundation for this study.

2.5 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).

There are numerous information systems on the market, but the homogenization problem of similar information systems is becoming increasingly apparent. Shannon and Weaver (1949) believed that the quality of an information system depends on the technical level, semantic level, and effectiveness level, which respectively represent the timeliness of information transmission, the consistency of information, and the impact of information on the receiver. Mason (1978) proposed that a communication system's quality could be evaluated from product, production, and impact perspectives, with the impact further divided into the effect on the information receiver and the effect on the organization. DeLone and McLean (1992) reviewed the literature on management information systems from the 1980s and proposed the Information Systems Success Model. They argued that the measurement of information systems includes two key factors: information quality and system quality, which independently or jointly affect personal use and satisfaction with the system, ultimately impacting the organization (Mohammadi, 2015; Wang, 2013).

After the initial Information Systems Success Model was proposed, many scholars in the 1990s applied it to empirical research on management information systems. They

suggested that not only the accuracy and conveyance of information but also the services provided by management information systems are crucial. Therefore, DeLone and McLean (2003) revised the initial model and proposed an updated one. The updated model includes three main aspects: information quality, system quality, and service quality. These dimensions independently or jointly influence personal use and satisfaction with the system, thereby impacting net benefits. Information quality relates to the accuracy, completeness, and timeliness of the content available on a website. In contrast, system quality pertains to the technical aspects of the website, and service quality involves the overall support provided to website users, such as reliability and responsiveness (DeLone & McLean, 2003; Hsu et al., 2015).

The Information Systems Success Model was initially proposed in the context of management information systems but has proven applicable in other contexts. Mohammadi (2015) integrated the Technology Acceptance Model and the Information Systems Success Model to explore the impact of e-learning systems' quality characteristics, perceived ease of use, and perceived usefulness on the audience. He added a new component, educational quality, defined as the extent to which the e-learning system facilitates collaborative learning. Hsu et al. (2015) combined the Information Systems Success Model and trust theory to study the antecedents of repurchase intention in online group buying, exploring the roles of perceived value, trust, website dimensions, and seller dimensions. Jin and Cheung (2008) used the Information Systems Success Model to investigate the pathways encouraging continued participation and use of social network information. They found that perceived information usefulness and system satisfaction depend on information quality and source reliability. Recently, Dong (2018) applied the model to mobile news media, suggesting that news information quality is a crucial performance indicator for traditional news media during digital transformation. Zhao (2018) expanded the model's application to include social media platforms like WeChat, comparing the influence pathways of user behavior across different platforms (Mohammadi, 2015; Zhao, 2018).

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.

2.6 Conceptual Framework

The information system success model has already been applied to various online information or social media contexts, including e-learning, social networks, online group buying, mobile news media, Weibo, and WeChat. Applying this model to the study of user behavior in content-based mobile social media is both reasonable and scientifically valid (Mohammadi, 2015; Jin & Cheung, 2008; Wang, 2013; Zhao, 2018; Zhang et al., 2016).

According to the literature on user perception theory, users' perceptions of content-based mobile social media affect their psychological states and behaviors. The primary focus of user perception is the evaluation of the platform's value and quality. Perceived value includes aspects such as hedonic, utilitarian, emotional, and social values. Since emotional and social values pertain to the spiritual connection between influencers and their audience on the platform, these two values primarily depend on the influencers rather than the social media platform itself and are thus not the focus of this study (Zeithaml, 1988; Garrett, 2020; Shaikh, 2017).

Perceived quality, which includes system, information, and service quality, is a significant factor in the information system success model. Content-based mobile social media can also be considered an information system. According to the information system success model and Zhao's (2018) research, the impact of system quality, information quality, and service quality varies among different social media platforms. Therefore, this study retains these three factors as independent variables. However, considering the diverse online environment, users face more platform service functions, especially on content-based social media. Users' perceptions have become extremely varied. The information system success model only considers users' perceptions of system attributes and does not include other sociological and psychological factors (Shannon & Weaver, 1949; Mason, 1978; DeLone & McLean, 1992; DeLone & McLean, 2003).

Users with no specific goal often perceive the entertainment value of a product, while goal-oriented users perceive its utilitarian value. Hedonic value is usually associated with consumers' multisensory, emotional experiences of goods and services, especially the desire for entertainment, immersion, fantasy, and excitement. Users use

mobile applications not only to meet pure entertainment needs but also for other satisfaction, such as reading news on smartphones, browsing information online, or interacting on social media websites. These activities are not easily explained by hedonic value and are generally considered outside the realm of entertainment. In contrast, utilitarian value is closely related to effectiveness, goals, and economic purposes (Chandon et al., 2000; Liu & Arnett, 2000; Jahn & Kunz, 2012; Lin et al., 2011; Lu & Lee, 2012).

Drawing on Liu's (2015) research on perceived value measurement in WeChat official accounts, this study includes utilitarian value as an independent variable. Following Chandon et al.'s (2000) understanding and framework of perceived value, this study also incorporates hedonic value into the model.

This study is based on the information system success model, integrating the user perception theory and the 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.

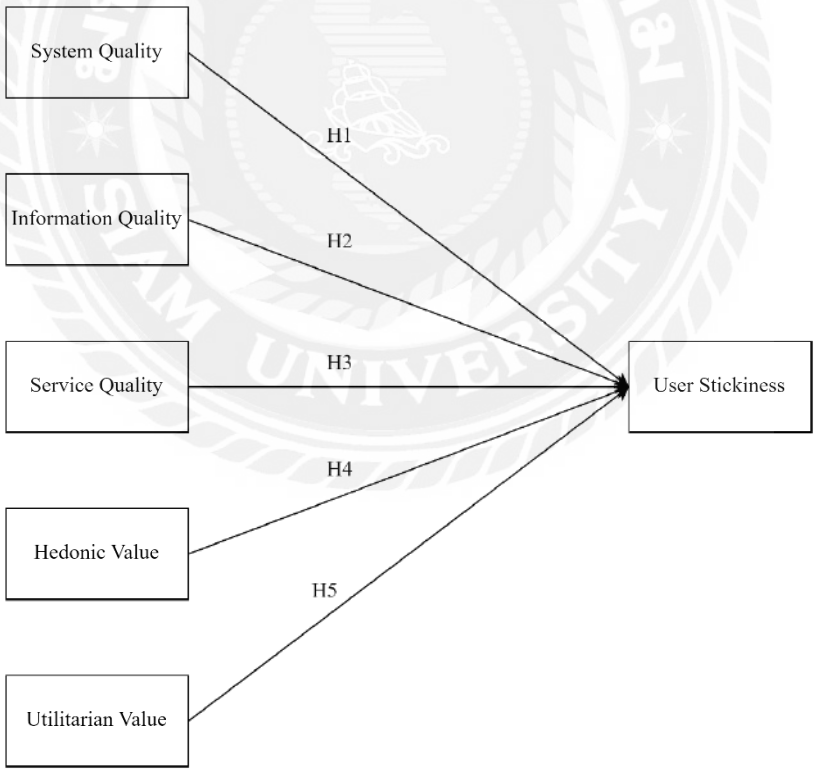

Figure 2.1 Conceptual Framework

Chapter 3 Research Methodology

3.1 Research Design

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

3.2 Questionnaire Design

Since this study investigated the impact of user perception on platform user stickiness in content-based mobile social media, it is crucial that respondents have experience with content-based mobile social media. Therefore, the initial section of the questionnaire, which collects basic personal information, includes a question on whether the respondent had experience using content-based mobile social media.

This study primarily explored the influence of user perception on user stickiness in content-based mobile social media. There are six variables: system quality, information quality, service quality, utilitarian value, hedonic value, and user stickiness. Based on established scales and the development characteristics of content-based mobile social media in the Chinese internet era and the needs of users, a total of 28 items were designed, using a five-point Likert scale.

Table 3.1 Measurement Items

Variable	Items	Reference sources
System Quality	Content-based mobile social media is responsive on a good network.	Delone (2003); Bai Bo (2015)
	The functions of the content-based mobile social media (commenting, retweeting, etc.) run stably.	
	The interface of content-based mobile social media is well laid out and I can find the functions I need.	
	The content-based mobile social media interface is convenient and easy to use.	
	Content-based mobile social media does not reveal my personal information.	

Information Quality	Information on content-based mobile social media is updated promptly and quickly.	Bai Bo (2015); Delone (2003); Weiyi Dai (2013)
	Content-based mobile social media have rich and diverse information.	
	When using content-based mobile social media, I can choose who to follow and reduce the interference of useless information.	
	The content of content-based mobile social media can be better displayed on the screen of mobile terminals such as cell phones and other mobile devices, such as text, pictures and videos.	
	The information provided by content-based mobile social media is easy to understand and suitable for me to utilize my fragmented time.	
Service Quality	The product alerts me when there are messages related to me on content-based mobile social media (being @, commenting, etc.).	Hsu (2000); Delone (2003); Weiyi Dai (2013)
	Content-based mobile social media offer a variety of features (comments, private messages, retweets, likes, etc.) to help me interact with my friends.	
	Combined with the unique features of mobile terminals (anytime, anywhere network access, positioning, photo taking, etc.), I feel that content-based mobile social media is gradually enriching its functions.	
	Content-based mobile social media can provide personalized information push services.	
	Content-based mobile social media enable me to search for information of interest easily.	
Utilitarian Value	I can search for information I need in content-based mobile social media.	De Vries (2014); Bai Bo (2015)
	I can search for information that is valuable to me in content-based mobile social media.	
	The information pushed in content-based mobile social media is helpful to me.	
	I can learn knowledge through the information pushed in content-based mobile social media.	
Hedonic Value	Information pushed in content-based mobile social media is interesting to me.	De Vries & Carlson (2014); Cha Jinxiang (2006)
	Information pushed in content-based mobile social media is relaxing for me.	
	I am attracted to information pushed in mobile social media content.	
	The information pushed in content-based mobile social media is enjoyable.	
User Stickiness	I will continue to use current content-based mobile social media.	Lu et al (2010); lin
	I would regularly use content-based mobile social media for information.	

	I would tend to use my current content-based mobile social media compared to other content-based mobile social media.	(2007); Tian Tenglong (2019); Lu Yajun (2019)
	I would refer to information recommended by content-based mobile social media when I need information.	
	I would like to use content-based mobile social media as part of my daily life.	

3.3 Hypothesis

Users exhibit different information behaviors at different stages, which in turn result in varying tendencies towards stickiness. User stickiness is closely related to the platform's system quality. For content-based mobile social media, providing high-quality information content, allowing users to easily and conveniently access this content, and ensuring the ease of use of the media interface directly affect user stickiness. The richness, reliability, and comprehensiveness of content directly influence user experience, while the ease of operation, interface friendliness, and social influence help attract users to long-term use. Chen and Lin (2018) studied the factors enhancing user stickiness on electronic tourism websites, confirming that system quality, information quality, security, and e-shopping value positively influence user stickiness. Liu (2019) found that the critical factors for users to continue using the same application include the richness and utility of the information provided by the platform; users are likely to continue using a platform only if they find it useful. Wang (2020) discovered that the richness of information increases platform attractiveness, encouraging continuous use and significantly affecting user stickiness. Chen (2017) also confirmed the importance of information value and convenience, showing a significant positive correlation with stickiness.

In content-based mobile social media, fragmented learning and leisure are essential functions and touchpoints for users to perceive platform value. User-perceived enjoyment refers to the enjoyment experienced during participation in activities, excluding predictable outcomes due to platform performance. Armenteros (2013) confirmed that enjoyment is directly proportional to usage intention. In the mobile social field, Li (2019) found that users who enjoy using WeChat and feel pleasure are more likely to be motivated to use it. Verhagen (2015) also believed that perceived social and hedonic value significantly influence user participation intentions in virtual environments. Yuan (2020) pointed out that even in deep learning contexts, user enjoyment is an important factor influencing stickiness, while utility is particularly crucial for users in such environments. Utilitarianism is judged by whether specific user

goals are achieved. In the context of travel applications, Fang (2018) similarly confirmed a positive correlation between perceived benefits and user participation intentions. Carlson (2016) argued that interactions with mobile apps and social media brand pages are particularly important for consumer experiences, which are valuable and promote positive brand behavior. Chinese scholar Bi (2017) found that users who perceive mobile commerce as useful during their first experience are likely to continue using the platform. Lin (2018) discovered that users who interact with companies on the platform and gain valuable information on common social, life, and industry topics are more likely to continue using the platform to gain more useful information. Zhang and Wang (2019) found that the higher the interest of communication product users in a particular information system, the greater the probability of continued use. This study conceptualizes utilitarian value as the utility users gain from content-based mobile social media, mainly valuable practical information. In this context, entertainment directly affects users' emotions, while functional value or utility is a significant advantage, meeting specific user needs and enhancing perceived usefulness, thus maximizing user loyalty.

Based on the Information Systems Success Model, the quality of the system, information, and services are key factors in evaluating the system during social media use. Based on the user perception theory, higher perceived quality leads to better user stickiness. Therefore, this study proposed the following research hypotheses:

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.

3.4 Sampling and Data Collection

The population of the study was those who are using content mobile social media, and the sample was 659. The survey questionnaires were primarily distributed and collected through the Questionnaire Star platform on WeChat and QQ. A total of 770 questionnaires were distributed. After excluding those that did not meet the research criteria (those without experience using content-based mobile social media) and those with low data quality (such as selecting the same answer for multiple questions consecutively or showing patterned responses), 659 valid questionnaires were retained, resulting in an effective response rate of 85.6%.

3.5 Data Analysis

Based on the collected questionnaire data, reliability and validity tests, descriptive statistical analysis, and regression analysis between variables were conducted using SPSS software.

Reliability testing ensured that the survey instrument consistently measured the concepts of interest, often assessed using Cronbach's alpha for internal consistency. Validity testing checked whether the instrument accurately measured what it was intended to measure.

Descriptive statistical analysis provided an overview of the data, including measures such as means, standard deviations, frequencies, and percentages, to understand the basic characteristics of the sample.

Regression analysis examined the relationships between the independent variables (system quality, information quality, service quality, utilitarian value, hedonic value) and the dependent variable (user stickiness), helping to determine the strength and direction of these relationships.

3.6 Reliability and Validity Analysis of the Scale

The overall Cronbach's Alpha value for the survey questionnaire, as shown in Table 3.2, is 0.930, indicates excellent internal consistency reliability of the scales used in this study.

Table 3.2 Results of Reliability Analysis

Number of questions	Cronbach 's α
28	0.930

The Cronbach's Alpha values for each variable's scale were measured, as detailed in Table 3.3. Specifically, the α values for system quality, information quality, service quality, hedonic value, utilitarian value and user stickiness are 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.

Table 3.3 Results of Reliability Analysis for Each Variable

Variable	Number of items	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 data were subjected to a discriminatory process of suitability for factor analysis and the results are shown in Table 3.4.

Table 3.4 KMO and Bartlett's Test[a]

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

From Table 3.4, 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.

Chapter 4 Findings

4.1 Descriptive Statistical Analysis

The effective survey sample size of this study was 659 respondents, categorized by demographic variables including gender, age, occupation, and education. In terms of gender distribution, there were 282 male respondents, accounting for 42.8%, and 377 female respondents, accounting for 57.2%. This distribution closely aligns with typical profiles of social media users, showing minimal deviation.

Regarding age distribution, the majority fell within the 18-25 age bracket, comprising 57.4% of the sample, followed by the 26-30 age group at 30.2%. This indicates that young adults are the primary users of content-based mobile social media, likely due to their higher receptivity to new technologies compared to other age groups. In terms of occupation, students constituted the largest group at 38.1%, followed by 217 respondents (32.9%) employed in various industries. Other occupational categories were relatively minor in representation. Regarding educational attainment, bachelor's degree holders accounted for 61.2% of respondents, while other educational levels each comprised less than 20%. This suggests that the majority of participants have received a good level of education, facilitating their rapid adoption of mobile application technologies, which corresponds well with the educational profiles of current social media users.

Table 4.1 Descriptive Statistical Analysis of Sample

Variable Name	Category	Sample Size	Proportion (%)
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
	Bachelor's	403	61.2
	Master	97	14.7
	PhD and above	8	1.2

4.2 Convergent Validity

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 4.2.

Table 4.2 Results of Convergent Validity Analysis

Variable	No.	Factor Loading (λ)	CR	AVE
System Quality	1	0.703	0.869	0.574
	2	0.807		
	3	0.884		
	4	0.639		
	5	0.732		
Information Quality	6	0.638	0.868	0.570
	7	0.794		
	8	0.763		
	9	0.817		
	10	0.751		
Service Quality	11	0.879	0.893	0.628
	12	0.790		
	13	0.786		
	14	0.641		
	15	0.846		
Utilitarian Value	16	0.778	0.861	0.609
	17	0.802		
	18	0.693		
	19	0.842		
Hedonic Value	20	0.724	0.839	0.569
	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 Table 4.2, 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.

4.3 Differentiation Validity

All latent variables were analysed for correlation and the square root of AVE was calculated for each variable. AVE was calculated as:

$$\text{AVE}=\frac{\sum(Factor\ Loadings)^2}{Number\ of\ Measurement\ Items}$$

As shown in Table 4.3, the square root of AVE 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 4.3 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**	0.248**	0.150**	0.780		
Hedonic Value	0.127**	0.202**	0.181**	0.289**	0.754	
User Stickiness	0.410**	0.469**	0.417**	0.388**	0.334**	0.775
Note: **Significantly correlated at the 0.01 level (bilateral).						

Table 4.4 Hypothesis Test Results

Hypothesis No.	Hypothetical content	Established or not
H1	System quality positively influences user stickiness.	Established
H2	Information quality positively influences user stickiness.	Established

H3	Service quality positively influences user stickiness.	Established
H4	Hedonic value positively influences user stickiness.	Established
H5	Utilitarian value positively influences user stickiness.	Established

Thus, hypotheses H1,H2,H3,H4,H5 are valid. It shows that system quality, information quality, service quality, hedonic value and utilitarian value have significant direct effects on user stickiness.

Chapter 5 Conclusion and Recommendation

5.1 Conclusion

This study started from the perspective of user perception, based on the theory of information system success model, and the characteristics of content-based mobile social media in the social network environment, and investigated the influence mechanism of user perception on user stickiness of content-based mobile social media. Through the questionnaire survey, 659 valid questionnaires were collected with the help of questionnaire star to verify the proposed research hypotheses. Based on the results of data analysis, the specific conclusions are as follows:

System quality, information quality, service quality, hedonic value and utilitarian value have an influence on user stickiness and the greater degree of influence is the service quality. As users spend more time and use the platform more frequently, they have a greater impact on its stability and convenience. The platform becomes better at understanding and meeting their needs, making it easier for users to find the information they want. This mutual interaction encourages users to keep using the platform.

5.2 Recommendation for Future Study

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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Appendix

Part 1 Basic Information

1. Do you have experience in using content-based mobile social media (e.g. Jieyin, Shutterbug, Weibo, Zhihu, and sipai, etc.)

○Yes

○No

2．Your gender is:

○Male

○Female

3．Your age is:

○Under 18 years old

○18-25 years old

○26-30 years old

Over 30 years old

4. What is your occupation?

○Student

○Government/Enterprise Employee

○Employee of an organization

○Self-employed

○Freelancer

5. What is your education level?

○High school/Junior college or below

○College

○Bachelor's degree

○Master's degree

○Doctorate and above

Part 2

Recall your true thoughts and feelings about using content-based mobile social media. According to each question item, select the corresponding degree number, 1 for strongly disagree, 2 for disagree, 3 for average, 4 for agree, and 5 for strongly agree.

Serial Number	Topic	Strongly disagree 1	Disagree 2	Average 3	Agree 4	Strongly agree 5
1	Content-based mobile social media is responsive on a good network.					
2	The functions of the content-based mobile social media (commenting, retweeting, etc.) run stably.					
3	The interface of content-based mobile social media is well laid out and I can find the functions I need.					
4	The content-based mobile social media interface is convenient and easy to use.					
5	Content-based mobile social media does not reveal my personal information.					
6	Information on content-based mobile social media is updated promptly and quickly.					
7	Content-based mobile social media have rich and diverse information.					
8	When using content-based mobile social media, I can choose who to follow and reduce the interference of useless information.					
9	The content of content-based mobile social media can be better displayed on the screen of mobile terminals such as cell phones and other mobile devices, such as text, pictures and videos.					

10	The information provided by content-based mobile social media is easy to understand and suitable for me to utilize my fragmented time.					
11	The product alerts me when there are messages related to me on content-based mobile social media (being @, commenting, etc.).					
12	Content-based mobile social media offer a variety of features (comments, private messages, retweets, likes, etc.) to help me interact with my friends.					
13	Combined with the unique features of mobile terminals (anytime, anywhere network access, positioning, photo taking, etc.), I feel that content-based mobile social media is gradually enriching its functions.					
14	Content-based mobile social media can provide personalized information push services.					
15	Content-based mobile social media enable me to search for information of interest easily.					
16	I can search for information I need in content-based mobile social media.					
17	I can search for information that is valuable to me in content-based mobile social media.					
18	The information pushed in content-based mobile social media is helpful to me.					
19	I can learn knowledge through the information pushed in content-based mobile social media.					

20	Information pushed in content-based mobile social media is interesting to me.					
21	Information pushed in content-based mobile social media is relaxing for me.					
22	I am attracted to information pushed in mobile social media content.					
23	The information pushed in content-based mobile social media is enjoyable.					
24	I will continue to use current content-based mobile social media.					
25	I would regularly use content-based mobile social media for information.					
26	I would tend to use my current content-based mobile social media compared to other content-based mobile social media.					
27	I would refer to information recommended by content-based mobile social media when I need information.					
28	I would like to use content-based mobile social media as part of my daily life.					