User-centered Interactive Design of Social Media Platform

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Abstract: The purpose of this study is to explore the user-centered social media platform interaction design strategy and practice. By means of questionnaire survey, in-depth interview, user observation and data analysis, this paper deeply analyzes user needs, behavior characteristics and interaction design cases of existing social media platforms. It is found that when users use social media, they have higher requirements on interface simplicity, intuitive operation and personalized recommendation. Based on this, this paper puts forward a series of optimization strategies of interaction design based on user needs, and verifies their effectiveness through design practice and case analysis. The results show that the optimized interaction design can significantly improve user experience and satisfaction, and enhance user stickiness. Generally speaking, the user-centered design concept is very important for the sustainable development of social media platforms, which is expected to provide new ideas and directions for future social media interaction design.

1. Introduction

With the rapid development of Internet technology, social media platform has become an indispensable part of modern life [1]. These platforms not only provide new ways for people to communicate, share and obtain information, but also profoundly change our social behavior and communication mode [2]. However, with the diversification of users' needs and the intensification of market competition, how to design a social media platform that can attract and retain users has become an urgent problem [3-4]. Therefore, the user-centered interactive design concept is increasingly important in the design of social media platforms.

Social media platforms have gone through the process of diversified development from early forums and blogs to today's Weibo and WeChat [5]. These platforms attract a large number of users by providing information publishing, sharing and communication functions. However, with the saturation of the market and the intensification of competition, how to improve user experience and enhance user stickiness has become the key to the development of social media platforms [6]. The purpose of this study is to explore the theory and practice of user-centered social media platform interaction design, so as to provide useful reference for improving user experience, enhancing user stickiness and promoting the sustainable development of social media platform.

The main purpose of this study is to explore how to optimize the user experience of social media platform by analyzing the user's needs and behavior characteristics. Specific research questions include:

What are the main needs and expectations of users when using social media platforms?

What are the problems in interaction design of existing social media platforms?

How to effectively apply the user-centered design concept to the interactive design of social media platforms?

2. Theoretical basis of social media platform and user interaction design

User interaction design refers to improving users' experience when using products or services by designing reasonable interfaces, operation processes and interaction methods [7]. Its basic principles include intuition, consistency, feedback, controllability and efficiency. These principles are also applicable to the interaction design of social media platforms.

The user-centered design concept emphasizes that the user's needs and expectations are always the starting point and destination in the design process [8]. In the interactive design of social media platform, the application of this concept is embodied in deeply understanding users' needs and behavioral characteristics, designing interfaces and functions that meet users' habits and expectations, and continuously optimizing and iterating products to meet users' changing needs.

User experience is an important index to evaluate the quality of a product or service, and interaction design is one of the key factors affecting user experience [9]. In the social media platform, excellent interaction design can improve the efficiency, satisfaction and loyalty of users, thus enhancing the competitiveness and influence of the platform. Therefore, it is of great significance to explore the correlation between user experience and interaction design for optimizing the design of social media platform.

3. An empirical study on user interaction design of social media platform

User demand analysis is the cornerstone of interactive design, which involves a deep understanding of user expectations, habits and pain points. Through the comprehensive use of questionnaires, in-depth interviews, user observation and data analysis and other methods (as shown in Table 1), designers can fully grasp users' expected functions and experiences of products, as well as their operating habits and problems when using similar products. Based on these in-depth understandings, designers can formulate interactive design strategies that conform to users' intuition and habits, ensure that the product interface is concise and intuitive, and the functions and operations are consistent, and can give users timely operational feedback, thus effectively improving user satisfaction and optimizing the user experience of products.

Table 1 User demand analysis method

Research methods	Specific method implementation
Questionnaire survey	A questionnaire was designed to collect users' usage frequency, purpose, preferred functions and problems encountered in the use of social media platforms.
Depth interview	Select representative users to conduct in-depth interviews to obtain their detailed experience of using social media platforms and their expectations for improvement.
User observation	Collect first-hand data through field observation or remote monitoring of users' behaviors when using social media platforms.
Data analysis	Mining and analyzing users' behavior data on social media platforms to identify usage patterns and trends.

The analysis of user behavior characteristics is helpful to understand users' preferences and habits when using social media. Through the application of various research methods, we found some key features in Table 2:

Table 2 Analysis of user behavior characteristics

User behavior characteristics	Description of specific behavior characteristics
Active time period	Users tend to be active during certain time periods, such as evenings and weekends.
Proportion of content consumption and content creation	Content consumption (such as browsing, likes and comments) far exceeds content creation.
Personalized recommendation acceptance	Users have a high degree of acceptance of personalized recommended content.
Social and interactive preferences	Young users pay more attention to the sociality and interactivity of the platform.

In this section, three popular social media platforms are selected as case studies to analyze the advantages and disadvantages of their interaction design:

Platform A: Its concise and intuitive interface design and smooth user experience are well received, but some functions are hidden too deeply, which makes it difficult for users to find them.

Platform B: It attracts a large number of young users through rich interactive elements and social

functions, but too many advertisements push the user experience.

Platform C: Its personalized recommendation algorithm is highly accurate, but the user feedback interface is too complicated, which makes it difficult for beginners to get started.

Through the user satisfaction survey, this paper collected the following key feedbacks: (1) Most users are satisfied with the interaction design of the current social media platform, but there are still some details to be improved. (2) Users generally report that advertising push needs to be more accurate and appropriate. (3) For novice users, more guidance and help are needed to improve their speed.

4. User-centered social media platform interaction design strategy and practice

4.1. Interaction design strategy formulation based on user needs

According to the above user demand analysis and survey results, the interaction design strategies in Table 3 are defined:

Table 3 User demand analysis and corresponding interactive design strategy

User demand analysis	Interactive design strategy
Users expect a simple and intuitive interface.	Simplify interface design: reduce unnecessary elements and highlight core functions to improve user's operation efficiency.
Users have a demand for the accuracy and appropriateness of advertising push.	Optimize advertising push: push accurately based on user behavior and preferences, while controlling the number and frequency of advertisements.
Novice users need more guidance and help.	Enhance novice guidance: provide detailed guidance and help for new users to reduce the difficulty of getting started.

Applying the basic principles of interaction design to the design of social media platform;

Intuitive: Through clear interface layout and intuitive icon design, help users quickly understand and operate the platform.

Consistency: Maintain the consistency of interface style and functional operation, and reduce the cognitive burden of users.

Feedback: Give timely feedback to the user's operation, such as animation, sound, etc., to improve the user's operation experience.

4.2. Design practice and case analysis

This section selects a specific social media platform for design practice, and analyzes the effect after practice in detail. Through targeted improvement and optimization, we have observed significant positive effects and verified the importance of the user-centered interaction design concept in the design of social media platforms. The specific analysis is as follows;

1) Simplification of interface design

In this paper, the complex and redundant elements in the original interface are cleaned up, and the core functions are highlighted, so that users can find the required content more quickly when browsing and using. For example, we have rearranged the commonly used function keys, reduced the operation steps and increased the intuitive visual prompts. This design adjustment significantly improves the user's operation efficiency, and the number of clicks and time required by users to complete the same task are reduced. In addition, the simplification of interface design also reduces the misoperation rate, because clearer layout and more intuitive operation logic enable users to execute their intentions more accurately.

2) Optimization of advertising push strategy

This paper redesigns the advertising push mechanism to make it more accurate and personalized. By collecting and analyzing users' behavior data, users' interests and preferences can be judged more accurately, so as to push more relevant advertising content. This optimization not only improves the user's acceptance of advertisements, but also significantly improves the click-through rate of advertisements. More importantly, users' satisfaction has also been significantly improved, and the advertising content they feel is closer to their own needs, which is no longer unnecessary

interruption.

3) The addition of novice guidance function

In order to reduce the difficulty of new users, this paper specially designed a set of novice guidance functions. This set of functions helps new users to understand the basic operation and special functions of the platform more quickly through simple step guidance and friendly tips. Novice-guided participation significantly improves the retention rate of new users, because they can integrate into the platform more quickly and start effective social activities. At the same time, we also noticed that users guided by novices showed higher activity and participation in subsequent use.

After the design practice, this paper evaluates the design effect through data analysis and user feedback, and puts forward the following optimization suggestions: (1) Continue to pay attention to the changes of user needs and adjust the interaction design strategy in time. (2) Strengthen user testing to ensure that new functions or changes meet user expectations and usage habits. (3) Constantly optimize the advertising push algorithm to improve the relevance of advertisements and user acceptance.

5. Conclusions

In this study, the interaction design of user-centered social media platform is deeply explored. Through the detailed analysis of user needs and behavior characteristics, and the case study of interaction design of existing social media platforms, this paper puts forward a series of interaction design strategies based on user needs, and verifies them with practical cases. The research results show that the optimized interaction design can significantly improve the user experience and enhance the user's stickiness, which is of positive significance to the sustainable development of social media platforms.

However, this study also has some limitations. For example, the sample size and diversity of user surveys need to be improved to reflect the needs of user groups more comprehensively. The depth and breadth of design practice can be further expanded, especially the application of interactive design strategies in different scenarios. In the future, with the continuous progress of technology and the continuous changes of user needs, the interactive design of social media platforms will face more challenges and opportunities. The user-centered design concept will always be the core principle guiding us to optimize design. Through continuous innovation and improvement of interaction design, we can expect the future social media platform to be closer to users and provide a more natural, smooth and personalized user experience.

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