

# Research on Personalized Service for Reading Popularization Based on New Media

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**Abstract**—This paper firstly outlines the necessity of reading popularization and the concept of new media. Secondly, it analyzes the role of new media in the promotion of reading with the popularity of mobile Internet, and then analyzes the operating mechanism of personalized services for reading popularization using the new media. Thirdly, a method based on new media for constructing the system of the personalized service system for reading popularization is proposed.

**Keywords**—New media, Reading popularization, Personalization

Reading is a necessary way to promote the accumulation of knowledge and enrich the mental world of human being. The education of a country's elites and the development of science and technology are inextricably linked to reading activities. According to recent years' research data on reading in China, the reading rate of the whole nation has increased for five years continuously, however, the amount of reading is still lower than developed countries. Therefore, to further demonstrate the importance of promoting reading, China will put the construction of reading-oriented society into national strategy. New media is a relative concept which would change with time passing by. The new media in the modern era generally refers to providing information and entertainment services with terminals like computers, mobile phones, handheld readers, and digital televisions, using channels such as the Internet, wireless communication networks, and broadband local area networks. New media includes websites, online communities, digital TV, online magazines, mobile phone text messages, Weibo, WeChat, etc.

## I. THE SIGNIFICANCE OF READING POPULARIZATION BASED ON NEW MEDIA

### A. A Wide Range of Users is Conducive to the Promotion of Reading

According to the "China Statistics Report on Internet Development", the number of Internet users in China reached 772 million till December, 2017, which includes 40.74 million new netizens this year. The Internet penetration rate was 55.8% with an increase of 2.6 percentage points from the end of 2016. The number of mobile phone users in China reached 753 million with an increase of 57.34 million compared with the end of 2016. The proportion of mobile Internet users has increased from 95.1% in 2016 to 97.5%, and the proportion continues to rise. The distribution of netizen covers all the group of age, occupation and education background. The number of new media users is growing and widely distributed, and the way to achieve universal reading promotion using new media is better than outdated ways.

### B. Mobile Devices are Conducive to the Promotion of Reading

With the development of network technology and electronic technology, the probability of Internet users using mobile devices has further increased. Netizens are prone to mobile phones, and the proportion of mobile Internet access continues to increase. On the contrary, the proportion of Internet access using desktop laptops is declining. The portability and immediacy of mobile devices allows information could be transmitted anytime and anywhere. Therefore, using mobile new media, books can be read and promoted with almost no time or space constraints.

### C. The Variety of Forms is Conducive to Innovative Promotion

The form of new media is extremely diverse, manifested in the diversity of media forms. In addition to websites, online communities, digital TV, online magazines, texts, Weibo, WeChat, etc., there are other rich forms such as text pictures, voice videos, games, etc. The online library could freely select, combine, and design the various forms to innovate the form and content of reading promotion.

### D. Big Data-Driven is Conducive to Personalized Promotion

With collection and analyze of human social behaviors and relationships, big data could effectively analyze, describe, quantify, predict and control the elusive human social behavior activity and relationship. So the value of big data is that the information it hides can guide human behavior. As for reading, data could be generated from searching for bibliographies, borrowing bibliographies, and downloading resources. By analyzing the data, the reader's needs and behaviors can be predicted to provide them with personalized and customized reading promotion.

## II. THE OPERATION MECHANISM OF PERSONALIZED READING POPULARIZATION BASED ON NEW MEDIA

Reading promotion based on new media is an information transformation activity. Mobile new media uses user information to generate interaction as a motivation, which reflects into a specific operating mechanism in reading promotion. It is necessary for college libraries to fully manifest the function of mobile new media that they must acknowledge the feature and operating mechanism of mobile new media.

*A. The Mechanism of Analyzing User's Behavior*

In the promotion of new media reading, the university library is the main body of service, and the reader belongs to the service object. The new media-based reading promotion campaign uses mobile new media as a promotional medium and digital resources as promotional content. Then the rational selection and application of new media can promote the development of reading promotion services. Mobile new media is closely tied to other elements, which could record the behavioral footprint of each user well. Through analysis of users' interests and needs, new media can provide personalized service for the reading promotion in university libraries. This kind of operation mechanism can not only help university libraries to discover potential users, accurately locate target groups, but also help libraries to provide better service content and improve reading promotion efficiency.

*B. The Dissemination Mechanism of Information*

In the process of reading promotion in the university library, the user can be regarded as the producer of information, and the library can be regarded as the provider of information. After the university library pushes the information to the user, the user could modify or improve these information if they find that the application value of the information can be re-evaluated and shared by the mobile terminal, thereby promoting the widespread dissemination of the library resources. Under the new media operation mechanism, the service objects of reading promotion in university libraries are diversified. Users are not only the object of reading promotion, but also the main body of reading promotion. Mobile new media generates a lot of information during the application phase. Among them, the widely transmitted and concerned information are more easily obtained by users and can also have greater influence.

*C. The Promotion Mechanism of Information Interaction*

The new media will closely link users who have common interests. After the information processing and improvement between users, not only the scope of information dissemination could be expanded, the influence of information promotion could also be enhanced. The development of digital reading promotion in university libraries focuses on establishing a continuous interaction with users, and the promotion mechanism of information interaction using mobile new media can meet this demand. With continuous interaction of information between the university library and the user, the user can exchange information with the library at any time, and let more users acknowledge the digital reading promotion activities by reposting and disseminating this information. According to the promotion mechanism of reading promotion in university libraries based on new media, a service promotion model of digital reading is constructed. As shown below:

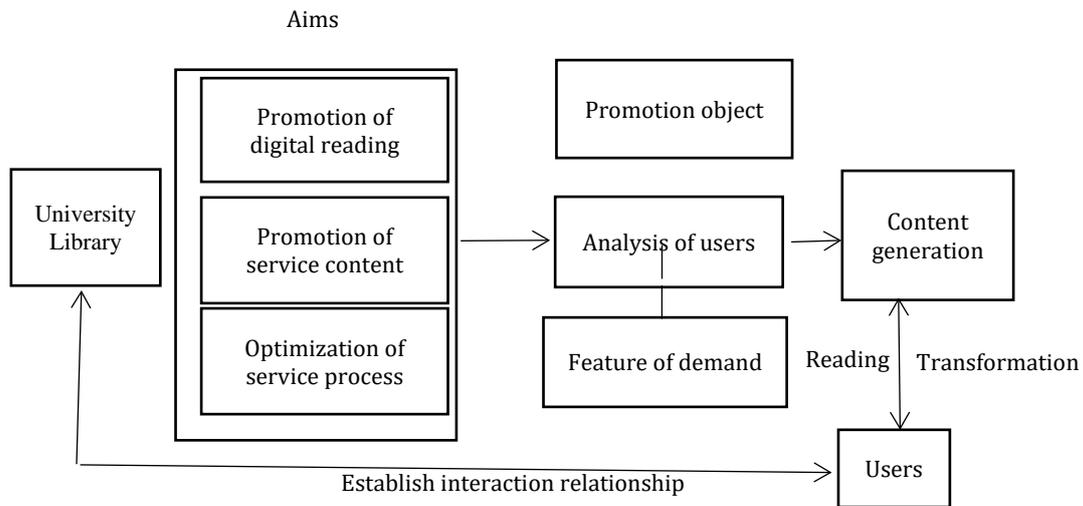


Figure 1 Personalized Service Model of Reading Promotion based on New Media

III. THE CONSTRUCTION OF PERSONALIZED SERVICE SYSTEM OF READING PROMOTION BASED ON NEW MEDIA

In the age of Internet, libraries should offer service under networked background. In addition to reforming service models and changing service concepts, traditional libraries need to increase networked technology investment and research efforts to improve the technical adaptability and environmental adaptability of modern library, making full use of intelligent agents to realize the personalized and active services of the library. The system is as follows.

*A. Establishing a User Mode Repository*

The ultimate goal of personalized service is to meet the personalized needs of users. Therefore, the acquisition of user needs and the construction of user modes are the key factors to achieve personalized service. The establishment of the reader information database mainly obtains user personalized information from the user's personalized information feedback, including both explicit and implicit feedback methods. The explicit feedback is through asking users questions; they could provide their own interests, hobbies, service requirements and evaluations. The implicit feedback refers to the automatic monitoring of the user's borrowing information, book query, reader consultation and other reader behavior through intelligent

agents, and analysis of user needs, to find the domain that best represents the user's needs. By filtering, extracting and refining the demand information, the information would be deposited into user mode repository. At the same time, according to the continuous changes of user interest, the user demand model is updated.

### *B. Information Collecting System*

Through networked technology investment and research, the technical adaptability and environmental adaptability of modern libraries could be improved. Providing search and matching of book databases, and using the information provided by Web information libraries and book databases, the library could customize personalized active promotion service models, and build applications that can take advantage of different data sources and quickly respond to user needs.

### *C. Personalized Active Service Process*

The whole process of personalized service includes user behavior acquisition, user model construction, service provision, user model update, etc. The implementation of service delivery is mainly realized through recommendation services. Readers can customize what they are interested in and enter the requirements into the system. The system periodically conduct intelligent analysis on the content in the reader pattern depository. According to the user's recent needs, the system would dynamically and flexibly searches and retrieves information matching the user's interests in time from the resource library and give the organized information results to readers in a timely manner. In this way, the reader can find the required information according to his own needs using the system, thus the basic active service function of the system could be realized.

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