# Research on the B2C Resource Construction Model for Library Flattened Services Postprint

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## Abstract

[Purpose/Significance] To address the gap between resource demand and resource acquisition in library services, this study constructs a resource development model with a flattened structure to help users eliminate resource barriers encountered during library usage and improve the efficiency of library resource development. [Method/Process] Drawing on the B2C business model, this paper explores the design philosophy of flattening library resource development. Taking the resource development of Chongqing University Library as an example, it formulates institutional frameworks for the resource development model and implements the B2C resource development model in practice. [Results/Conclusion] The adoption of the B2C resource development model by libraries has significantly improved collection quality, with substantial increases in both resource procurement efficiency and user satisfaction. Under the B2C resource development model, there are no intermediate links between library resource demand and user acquisition; the processes of resource "selection" and "procurement" are separated, maximizing the respective advantages of demand parties and procurement executors in resource development. Both print and digital resources procured by the library represent genuine user needs, resulting in highly targeted resource procurement and ensuring optimal assurance of the structure and content of resource development.

## Full Text

### Research on the B2C Resource Construction Model for Library Flat Services

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**Abstract**

[**Purpose/Significance**] To address the gap between resource demand and resource acquisition in library services, this study constructs a flat-structured resource construction model to help users eliminate resource obstacles encountered in the process of using the library and improve the efficiency of library resource construction. [**Method/Process**] Drawing lessons from the B2C business model, this paper explores the flat design concept for library resource construction. Taking the resource construction of Chongqing University Library as an example, it formulates the institutional framework for the resource construction model and implements the B2C resource construction model in practice. [**Result/Conclusion**] The adoption of the B2C resource construction model by libraries has significantly improved collection quality, resource procurement efficiency, and user satisfaction with resource procurement. Under the B2C resource construction model, there are no intermediate links between library resource demand and user acquisition. The separation of resource "selection" and "acquisition" maximizes the advantages of both the demand side and the procurement execution side in resource construction work. The print and digital resources procured by the library are the real needs of users, demonstrating strong procurement pertinence and ensuring optimal guarantee for the structure and content of resource construction.

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## 2. Library Adoption of the B2C Resource Construction Model

### 2.1 The B2C Resource Construction Model Adapts to Rapid Digital Resource Development

The Tenth Innovation Forum proposed that resources are fundamental to library services [2], and that the organization, revelation, and promotion of resources determine library service efficiency. In recent years, the continuous development of library resource digitization has been manifested in several aspects: increasingly mature and standardized policies, technologies, and management for digitizing print resources; a continuously rising proportion of digital resource procurement budgets; increasingly extensive coverage of digital resources; and increasingly improved utilization effects of digital resources [3]. The trend of continuous resource digitization has narrowed the distance between users and libraries, making it increasingly convenient for users to access library resources. When searching for library resources, users can easily provide feedback on both resources that the library can satisfy and those that are lacking. Due to differences in users' knowledge structures and academic research, the feedback on

satisfaction and deficiencies varies. Therefore, the traditional model of unilateral resource construction by libraries cannot meet the needs of different users, necessitating a new resource construction model to motivate users to actively participate in library resource organization.

### 2.2 The B2C Resource Construction Model Meets Diversified User Needs

With the rapid development of resource digitization, users' reading needs are also changing: reading tools increasingly rely on new media [3]; library space has transformed from physical space to diversified space integrating both physical and virtual spaces; and reading content has shifted from resources unilaterally presented by libraries to users to bidirectional interactive content where libraries and users mutually demand from each other. To meet diversified user needs, the content, carriers, and forms of library resource construction increasingly depend on reader demand. The diversification of reader needs has transformed library resource construction from static to dynamic. How to accurately grasp reader needs and quickly feed them back into resource construction practice is a major challenge currently faced by every library, requiring satisfaction of diversified user needs from the source of resource construction.

### 2.3 The B2C Resource Organization Model Meets Double First-Class Discipline Construction Needs

On September 21, 2017, the Ministry of Education officially announced the "Double First-Class" construction list, with 42 universities entering the ranks of first-class university construction and 95 universities entering the ranks of first-class discipline construction, marking the entry of the "Double First-Class" construction into an effective implementation stage [4]. As the primary information resource guarantee and support system of universities, university libraries are important carriers for first-class discipline construction and need to explore new resource construction models to accurately obtain demand information for literature that satisfies "Double First-Class" disciplines and ensure the effective implementation of "Double First-Class" construction.

## 3. Differences Between the B2C Resource Construction Model and Reader Recommendation, Patron-Driven Acquisition

Reader recommendation refers to readers recommending the purchase, acquisition, or storage of certain literature resources to the library [5]. Patron-Driven Acquisition (PDA) is a resource construction model where the library purchases literature according to certain standards or parameters based on readers' actual needs and usage [6]. The B2C resource construction model compresses the intermediate links between resource demand and user acquisition, directly organizing resources by users to meet their own needs. Although these three models all

emphasize the importance of user needs to a certain extent, they have certain differences in terms of resource construction subjects, scope, approaches, and requirements.

### 3.1 Difference in Resource Construction Subjects

In reader recommendation, the subject of resource construction is the library, with users only participating in the recommendation activity. In contrast, the subjects of both PDA and B2C resource construction models are users, with libraries delegating the rights of resource construction to users and cooperating with the subjects' needs and choices during the procurement process to complete resource construction work.

### 3.2 Difference in Resource Construction Scope

Theoretically, reader recommendation allows users to participate in recommending all resources. However, due to inherent limitations of information resources, poor stability and sustainability of recommendation methods, and complex resource recommendation processes, resources actually purchased through reader recommendation only constitute a small portion of print books and an extremely small number of databases [7]. Based on Chongqing University's resource procurement results over the past five years, print resources purchased through reader recommendation account for only 0.14% of the university's total print procurement volume on average each year, while databases recommended by readers account for only 0.11% of total database procurement. PDA originated from utilizing interlibrary loan services to promote and supplement print collection construction. With the development of e-books, PDA has expanded to the field of e-book procurement [8]. Therefore, the scope of user participation in resource construction through PDA mainly involves print books and e-books, without involving database procurement. The B2C resource construction model delegates to users the authority to complete all library print book procurement, e-book procurement, and digital resource renewal, trial, and purchase decisions. Under the B2C model, users participate in the broadest scope of resource construction, covering all library resources.

### 3.3 Differences in Resource Construction Approaches and Requirements

Reader recommendation generally involves users recommending resources to the library through written recommendations, email, forums, telephone, etc. The more recommendation channels there are, the more intermediate links and participating administrators exist between recommended resources and actual procurement execution, affecting the accuracy of conveying users' resource demand information and resulting in low final execution efficiency. In a "multi-channel" recommendation environment, the gap between the original intention of setting up reader recommendation to meet user needs and the actual satisfaction effect is widening. PDA requires vendors to provide MARC records of books

that meet preset documentation requirements, which are then imported into the library catalog system. Users can consult bibliographic records through the library OPAC and select links to directly read e-books or request print literature. After library review, unified payment for rental or purchase is made [9]. The library OPAC system is the primary approach for the PDA model. In the B2C resource construction model, the approach for users to achieve resource construction is through the "User Procurement System" that integrates the OPAC system, reader system, and digital resource management system, which constitutes an important component of the smart library. Users only need to log in to the "User Procurement System" to directly procure resources according to their needs. It is worth emphasizing that the B2C resource construction model does not require vendors to provide MARC records for unpurchased books.

## 4. Practice and Effects of the B2C Resource Construction Model

### 4.1 Formulation of the B2C Resource Construction Model System

The resource construction system is the foundation of the library B2C resource model. Against the backdrop of rapid information technology development, increasingly diversified resources, enhanced reader personalized needs, and annual increases in library budgets, a user-centered resource construction system concerns both the quality of resource construction and the sustainability of the entire resource construction model [10]. Formulating a resource construction system that conforms to flat services is key to B2C resource construction. Chongqing University focuses on three aspects—procurement system, management system, and incentive system—to formulate the corresponding "Chongqing University Library Resource Procurement User System," "Chongqing University Library Resource Procurement Management System," and "Chongqing University Library Resource Procurement Reward System."

**4.1.1 Library Resource Procurement User System** Users are the subjects of the B2C procurement model, making it necessary to certify user identity, responsibilities, and procurement behaviors. According to the requirements of the "Chongqing University Library Resource Procurement User System," the procurement system defaults to users being Chongqing University faculty and current students. Before obtaining procurement authority, users must complete detailed personal information and real-name authentication to ensure the authenticity and validity of user identity. Additionally, user guidelines, user commitments, and legal systems that users should comply with are indispensable parts of the user system, ensuring the effectiveness of user procurement behaviors.

**4.1.2 Library Management System** The library management system includes the service system for user procurement processes and the business system

for executing user procurement results. The service system primarily standardizes how library administrators and teams provide materials, explanations, and other relevant information required by users based on actual procurement situations. The business system refers to the system for executing commercial procurement, namely conducting business negotiations, contract signing, payment, and other work according to the nature of resources and procurement processes required by government departments and the university. The formulation of the service system ensures the completeness of information on resources needed by users, including resource overviews, disciplines, and comparisons with similar resources. The formulation of the business system clarifies the procurement laws that librarians should comply with when executing user procurement results, ensuring that resource procurement meets both user requirements and relevant laws and regulations.

**4.1.3 Reward System Under the B2C Resource Construction Model** Under the B2C resource construction model, the enthusiasm of users as subjects plays a crucial role in the entire resource procurement process and determines the operational effectiveness of the B2C model. Through the formulation of a reward system, user procurement enthusiasm can be mobilized and user participation increased. The more users participate, the more authentic the demand information becomes, and the shorter the distance between library resource construction content and users' real needs.

### 4.2 Practice of the B2C Resource Construction Model

**4.2.1 User Login to Procurement System** Users log in to the "Reader System," respond to prompts confirming their willingness to be granted procurement user status, ensuring that their procurement content is for their own needs, and confirming that they will bear legal responsibility for their procurement behaviors, complete real-name authentication, and then enter the library's "User Procurement" system to obtain procurement authority.

**4.2.2 User Procurement of Print Resources** After entering the "User Procurement" system, the user's identity is displayed as "Procurement User." By clicking on "Print Book Procurement," users enter the library's OPAC system. Users can search for required print books through different retrieval approaches such as title, author, ISBN number, etc. If there is a hit, the system prompts "The library already has this book," and users can go to the indicated area to borrow or reserve the book. Alternatively, the system may prompt "Another user has already submitted procurement information; this book is being procured; please wait," rendering the user's procurement search action invalid. If there is no hit, it means the library has not purchased the book and no user has submitted procurement information. The system then prompts the user "Confirm whether to include this book in the procurement list." If the user clicks confirm, the book's information is submitted to the "Pending Print Book

Purchase" list in the library procurement management backend. Due to budget limitations and the university's discipline construction layout planning, the Chongqing University Library User System clearly stipulates: each user can procure a maximum of 3 books per day; all users in each discipline can procure a maximum of 15 books per day; and key disciplines under the Double First-Class construction can procure 30 books per day.

**4.2.3 User Procurement of Digital Resources** After logging into the "User Procurement" system, users can click on "Digital Resource Procurement" to add trial resources and submit their procurement opinions on new purchases and renewals. By entering "Trial Resources," users can add databases they need to trial. Library procurement personnel collect information on the content, website, authority, etc., of user-submitted trial databases, supplement the information for user-recommended trial databases, and after perfecting the detailed database information, publish it to the trial database list. Users can select whether to trial from the trial list, and databases that receive "Confirm Trial" clicks from over 30% of procurement users will automatically enter the library's trial resources. In "New Purchases," library procurement personnel publish trial effectiveness data for databases whose trial periods have expired, mainly including browsing frequency, download counts, etc. Users can check whether to purchase based on the library's published planned new resource information and submit their reasons for selection. Trial resources are sorted from highest to lowest according to the number of users selecting them for purchase, and the library publishes the user selection results. When users click on "Renewal Resources," resources that are about to expire and require renewal decisions are listed. Users make selections based on their own needs, clicking whether to renew and providing reasons. After the selection period ends, procurement administrators statistically compile the user renewal selection results and publish them.

**4.2.4 Resource Evaluation and Review** The library evaluates and reviews print resources procured by procurement users based on the library's budget allocation and resource construction policies and plans. The budget allocation principle for literature resources at Chongqing University Library is: coordinated development of print and digital resources with digital resources as the main focus, highlighting disciplinary characteristics. The print literature budget is controlled at 35%-40% of the total budget, emphasizing the completeness of literature collections from national top 100 publishers and key publishers, as well as procurement of classic literature from various disciplines and textbooks, teaching references, and toolbooks for Double First-Class discipline construction. The digital resource budget is controlled at 60%-65% of the total budget, focusing on guaranteeing Chinese and foreign academic journals, dissertations, and full-text databases for key disciplines, and emphasizing the introduction of literature from authoritative publishers. Based on the principle that users procure resources they need, Chongqing University Library encourages users to

actively procure print resources to effectively supplement the collection. The review of user-procured print resources is directly completed by print resource procurement librarians in the Resources Department. Each batch of user procurement cannot exceed 10,000 RMB, and the annual total cannot exceed 15% of the annual print resource budget. To improve procurement efficiency, orders totaling less than 3,000 RMB can be directly purchased by corresponding subject librarians (through on-site bookstore procurement, online purchase, or vendor purchase). For urgently needed discipline resources, users can borrow them first before processing. The selection results for user new purchases and renewal of digital resources are evaluated and reviewed by the library through organized librarians, internal and external experts, and procurement representatives. The evaluation principles for digital resources at Chongqing University mainly highlight disciplinary characteristics while considering new discipline development; prioritize academic literature resources over non-academic resources; give priority to adding digital resources on platforms with high utilization rates; and emphasize strong professional joint construction within the university. The evaluation of digital resources at Chongqing University mainly includes assessing the authority of resource content, resource capacity, data integrity, and involved disciplines; testing system functions such as retrieval, resource navigation, ease of use, and user-friendliness; evaluating the service capabilities and sustainability of resource service providers; and investigating resource application cases and feedback from domestic users.

**4.2.5 Library Execution of Procurement** After resource evaluation and review are completed, library procurement personnel execute the procurement. Currently, Chongqing University Library completes literature resource procurement through six methods based on differences in resource supply, nature, and price: sporadic procurement, competitive negotiation, single-source procurement, campus bidding, public bidding, and joint procurement.

**4.2.6 Rewards for User Procurement** After procurement users complete resource procurement, they can check the procurement progress of resources in "My Procurement." Upon successful resource procurement, procurement users receive point rewards. The "Chongqing University Library Resource Procurement Reward System" clearly stipulates: 10 points for each valid print resource procured by a user; 100 points for each valid digital resource procured by a user. Users receive 1 point each time a print resource they procured is borrowed, and 10 points if a digital resource they procured ranks in the top 20 in monthly usage rankings. Procurement users can exchange earned points for privileges such as increased book borrowing quotas and extended borrowing periods. Through rewards for user procurement, users are encouraged to become "procurement users," to enhance their understanding and utilization of library resources, to promote procured resources, improve resource utilization effectiveness, and inspire more users to participate in library resource construction.

### 4.3 Effects of the B2C Resource Construction Model

Chongqing University adopted the B2C resource construction model. In 2017, it newly purchased 100,000 print book titles, of which 8,579 print books were procured by users, generating over 100,000 borrowings. This borrowing frequency accounted for 18.11% of the total print collection borrowings, with an average of 12.5 borrowings per user-procured book. In 2017, digital resource utilization rate increased by 18.92% compared to 2016, and resource procurement satisfaction increased by 63.70% compared to 2016. Through a one-year test of the B2C resource construction project, Chongqing University significantly improved collection quality and substantially increased resource utilization rates.

## 5. Reflections on the B2C Resource Construction Model

### 5.1 Differences Between the B2C Resource Construction Model and Existing Resource Procurement Models

Currently, library resource procurement methods mainly involve procurement librarians selecting print resources and trial databases based on resources provided by suppliers and user demand surveys, using their own knowledge, and then organizing evaluations and procurement of trial databases [11]. Compared with this, the B2C resource construction model has obvious advantages in authentic demand and timely satisfaction. The main differences between the two are manifested in the following three aspects.

**5.1.1 Flat Structure** Under the existing procurement model, the structure of procured resources is three-dimensional: demanded resources → library → user acquisition, with considerable time lag between demanded resources and user acquisition. Whether resources are ultimately purchased also depends on the library. Therefore, readers cannot achieve immediate resource demand, and their enthusiasm for participating in collection construction gradually decreases [12]. Under the B2C resource construction model, the library link in the three-dimensional structure is fundamentally removed, forming a flat structure between resource demand and user acquisition. After users obtain the "procurement user" status, there are no longer intermediate links between library resource demand and user acquisition, effectively reducing knowledge structure barriers and communication barriers between the library and users. Whether resources are ultimately procured no longer requires library mediation. Therefore, it fundamentally solves the long-standing efficiency problem in the library field regarding responding to reader demands.

**5.1.2 Separation of Selection and Acquisition** Currently, most library resource procurement represents "library selection," with "user selection" only serving as a supplement to "library selection." The authority for resource selection and acquisition remains mainly concentrated in the library. Due to incomplete disciplinary background ratios among librarians and limited pro-

fessional knowledge, although libraries conduct some surveys during resource selection, they cannot meet the professional literature needs of users across all disciplines, nor can they easily satisfy niche information needs of users. The B2C resource construction model delegates the most difficult-to-grasp aspect of resource construction—"selection"—to users, utilizing users' professional knowledge backgrounds and expertise to improve the quality of "selection." This liberates libraries from the situation of simultaneously handling both "selection" and "acquisition" of resources, allowing them to focus more on coordinating, organizing, and consolidating resources "selected" by users. This separation model of "selection" and "acquisition" maximizes the advantages of both the demand side and the procurement execution side in resource construction work, mobilizing their respective strengths and embodying the concept of specialization, thereby greatly improving the efficiency of library resource construction work.

**5.1.3 Optimal Guarantee** Under the B2C resource construction model, on the one hand, users can understand the matching situation of library resources while searching for what they need and submit purchase requests. On the other hand, the library can grasp users' resource demands and trends through backend statistical results from the "User Procurement" system. The actual procurers of library-purchased resources are users, ensuring that purchased resources are indeed needed resources. The print and digital resources ultimately procured by the library are the real needs of users from different disciplines during their learning, teaching, and research processes. Resource procurement demonstrates strong pertinence, and the structure and content of resource construction can be optimally guaranteed.

### 5.2 Experience with the B2C Resource Construction Model

The B2C resource construction model accelerates the acquisition speed of demand information and makes library resource construction work more efficient. The project implementation has gradually realized the service concept of user demand-centeredness at Chongqing University Library and accelerated the process of library service flattening. The following experiences have been gained in practical operation: The "User Procurement System" is the guarantee of the B2C resource construction model, and its design and development require seamless integration and effective consolidation with the library OPAC system, reader system, and digital resource management system. Since the subject of resource construction is completely delegated to users, and different disciplines have different needs for professional academic resources, there exists a problem of users "competing for selection" in the resource selection process. Therefore, conducting statistics and publication of the disciplinary proportions of existing resources and formulating scientifically practical collection expansion plans and budget allocations are the foundation for libraries to implement the B2C resource construction model. The quality of users "selecting" resources depends on users' abilities to identify, filter, organize, and analyze research literature. Therefore, the operation of the B2C resource construction model requires li-

braries to strengthen user education and guidance, continuously broaden and deepen users' information literacy, and enhance literature retrieval instruction activities and collection literature reading promotion activities.

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## Author Contributions

Wang Ying: Designed the overall research framework and wrote the paper; Yang Xinya: Revised some content.

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**Research on the Model of B2C Resource Construction for Library Flat Service**

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**Abstract:** [Purpose/significance] In view of the gap between resource demand and resource acquisition in library service, a flat structure of resource construction model is constructed to help users eliminate the obstacles encountered in the process of using library resources and improve the efficiency of library resource construction. [Method/process] Drawing lessons from B2C business model, this paper probes into the flat design idea of library resource construction. Taking the library resource construction of Chongqing University as an example, it formulates the system of resource construction model and carries out the practical operation of B2C resource construction model. [Result/conclusion] The use of B2C resource construction mode in libraries has significantly improved the collection quality, the efficiency of resource procurement and the satisfaction of resource procurement. There is no intermediate link between library resource demand and user acquisition under B2C resource construction mode. Resource "selection" and "acquisition" are separated. The greatest advantages of both the demander and the purchasing executor are brought into play in resource construction. The paper resources and digital resources purchased by the library are the real needs of users and the resources purchased are purchased. With pertinence, the structure and content of resource construction can be guaranteed optimally.

**Keywords:** library flat B2C resources construction

*Note: Figure translations are in progress. See original paper for figures.*