A Probe into Chinese College Mobile Library Service
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Abstract. Over these years, the mobile library service has become popular among colleges. It can be referred to as a result of continuous development of mobile internet technology. College Mobile Library (CML) service significantly facilitates the information retrieval by faculties and students, and provides a convenient platform for their work and study. However, with the ongoing improvement of information technology and the continuous transformation of society, especially the constant enhancement of big data technologies and outcomes, new requirements have been posed to the level of CML service. To this end, we should actively probe into CML service, and pool our efforts to keep up with the time.

Introduction
College mobile library (CML) emerges as the mobile internet technology continuously develops. Its emergence has introduced the unprecedented reform on college libraries, which greatly facilitates the information retrieval by faculties and students. On the one hand, CML provides a convenient channel for readers to readily use the information resources, on the other hand, it also provides a new platform to allow for the communication between library and readers, and its application prospect is very inspiring[1]. At present, new requirements have been posed as to the service level of CML, due to the updates of technology and the changes of social transformation. To this end, we are required to make a deep exploration and substantial improvement on CML service, under the new social situation, and pool our efforts to upgrade the level of CML service, so as to meet the needs of faculties and students.

Origin and Current Situation of CML in China
Mobile library is a result of combining information technology and library service. In particular, with the accelerated pace of life and the increased working efficiency nowadays, people ask for a convenient channel which can fulfill the individual needs in respect of information retrieval. Therefore, the mobile library has aroused the growing attention, and even has been listed in major academic researches over the last years. It can be said that the mobile library shows an enormous prospect for further development.

Colleges undertaking the mission of information dissemination and human civilization propagation should have strongly demanded the mobile library. With the development of information technology, the mobile service has been incorporated into our everyday life, and Chinese college libraries also seize this opportunity to provide their own mobile library service [2]. In China, Beijing Institute of Technology operated the SMS push platform in 2003, making it the first to provide CML service. In 2006, the WAP-based library information service mode was prototyped. Especially since 2008, the number of colleges introducing this mode began the geometric growth, followed by the research and discussion on mobile library, which became one of the hot topics in academics. This ushered the peak in mobile library construction.

Major Service Modes of Mobile Library
In the early stage, there are three available service modes of mobile library, i.e.: SMS service, WAP service and client service. In recent years, full-text reading service has also been prototyped. Full-text reading can be divided into the image format-based layout reading, and TXT-based text reading. With respect to full-text reading mode, Sursen Mobile Library and Fanzhou Mobile Library have been...
substantially popularized in the latest mobile library version. At the present stage, although it remains to be improved in terms of the quantity of literature and the accuracy of test, its emergence still marks the upgrading of mobile library service mode, which further contributes to the research and study of readers.

To date, the service items as contained in mobile library mainly include:
Catalogue, Renewal, Personal Information, News, Lectures, Reminder on Expiry, Recommended Collection, My Library and Bibliography Scanning.

Advantages of CML Service

Compared with the conventional library service, CML service is considered to better achieve the “reader-centered” purpose, and its advantages are mainly described below:

**Searching Efficiency Has Been Significantly Improved.** Compared with the conventional library platform, mobile library provides a more convenient access for college faculties and students to search literature data. Due to its typical convenience, the searching efficiency has been significantly improved. This will result in the comprehensive improvement in the learning efficiency by students, and the lesson planning and research efficiency by faculties.

**The Catalogue Capacity Is Increased at a Lower Cost and the Repository can be Promptly and Effectively Updated.** Catalogue capacity is the most important indicator for the measurement of library. For a conventional library, the only way to increasing the capacity is to expand the library scale, which would not only relate to the land, but also require a lot of labor forces, materials and financial resources. In contrast, mobile library can significantly increase the catalogue capacity at a lower cost. Furthermore, it will also update the repository in an effective and prompt manner, so that readers are given a synchronized access to the latest literature.

**MOOC is Available for Public Attendance.** MOOC (Massive Open Online Course) is one of the derivatives of CML. It enables faculties and students to freely share the teaching resources and flexibly choose the online course at a lower cost. This is a useful supplement for classroom teaching in colleges.

**Library Resources can be Shared from College to College, from Region to Region, Even from Country to Country.** Sharing of resources is one of the biggest advantages of the Internet. Through CML, library resources can be shared from college to college, from region to region, even from country to country. This further provides a convenient access for faculties and students to literature data.

How to Provide CML Service Reasonably

**Improve the professional quality of librarians.** At present, a large proportion of the librarians in domestic colleges have the outdated knowledge structure, are not familiar with database technology, network maintenance technology and other mobile library practices, which will limit their work in the inherent way of thinking, and make it difficult to provide mobile library service smoothly. For this reason, it is urgent for college to improve the professional quality of librarians. To this end, college should allocate the professionals with a good knowledge of mobile library service, give training to these professionals, and make them familiarized with the operations of mobile library as soon as practicable, and change their service awareness.

**College should Promptly Change Its Idea of Library Management.** While the mobile library has been widely popularized in colleges, electronic catalogue still has a smaller proportion, or print catalogue has a larger proportion. It can be primarily attributed to the fact that many colleges generally consider it very costly to establish a large-scale electronic database, and even with such establishment, if the number of visitors is not large enough, it is difficult to recover the cost. These prior and post concerns hinder the further enhancement of CML construction. The level of CML service will be in stagnation if college does not change its idea for a long time. In this concern, college must promptly change its ideas, expand the scale of electronic database, and increase the proportion.
of electronic catalogue. The concern of cost recovery can be addressed by strengthening the promotional campaigns.

**Upgrade of the Technological Level of Campus Network Devices.** Mobile devices are the vehicle of mobile library. For CML users, some use the computer devices in library electronic reading room to log onto the mobile library, while some use their PCs or mobile phones. Until now, some colleges are still subject to certain issues in respect of the network device technology. For example, some issues make it difficult for faculties and students to use the mobile library, such as small campus network traffic, high failure rate of computer, slow network speed, and vulnerability to crash. Therefore, college should pool greater efforts to upgrade the campus network devices, ensure the normal use of network devices, and address their possible concerns when using the mobile library.

**Pool Greater Efforts in the Promotional Campaigns of CML Service.** For different colleges, faculties and students will be motivated to use the mobile library if they could make appropriate promotional campaigns of CML service. However, once the number of CML users reaches a certain scale, the technical cost will be recovered within the shortest time practicable, and the enthusiasm of colleges in MLS construction will be mobilized, forming a virtuous cycle. In particular, these promotional campaigns should be targeted at those freshmen, so that they will gain some knowledge about the mobile library after the enrollment.

**With Respect To the Promotional Campaigns, We May Follow These Steps**

**Through Campus Website.** After the formal operation of mobile library, college should consciously rely on the campus homepage, news network, and library homepage to post the relevant information, introduce to faculties and students about the advantages and instruction for use of the mobile library, and encourage them to use it.

**Through Social Media.** To date, faculties and students generally acquire the information through social media. Therefore, it is an effective way to promote CML service through social media. On the one hand, these promotional campaigns can be properly launched by social media in cooperation with campus website, and on the other hand, readers will be attracted by the award registration activities launched in weibo.com, renren.com, campus BBS and other social media to register and use the mobile library.

**Through Free Experience.** Faculties and students will clearly know the advantages of mobile library an show an interest in using the mobile library through free experience and combined with the on-site explanation. Furthermore, they will master the basic essentials in using the mobile library. Therefore, college should launch the free experience of mobile library in a planned manner.

**Through Feature Lectures on Mobile Library.** Lecture is one of the efficient means of communication. College may consciously open feature lectures on mobile library, and give a comprehensive presentation on its advantages and knowhow.

**Through Library Posters.** Library is the customary venue for faculties and students. A set of promotional posters about the mobile library can be specifically produced and labeled in the visible areas at the entrance to library hall, so that they will notice these posters upon the entry.

**Through SMS and E-Mail Push Service.** It is another effective means for the promotional campaigns of CML. The push contents mainly involve library news, new available resources and services, library activities, important notes, and festival greetings. 1-3 pieces of message for each push are preferred. In doing so, faculties and students will gain a comprehensive knowledge of the mobile library without antipathy.

Regularly Gather The Comments From Faculties And Students. After the formal operation of CML, college should survey among the faculties and students, and gather the comprehensive comments to know their demands in using the mobile library, develop the improvement scheme through analysis and summarization, so that the level of CML service will be upgraded.

To this end, we may adopt the following methods to gather their comments:

**Through Library Website and Mobile Library Product.** At present, comment section is provided on CML website and CML product, which allows faculties and students to feedback the
comments and suggestions when using the mobile library. Library should allocate the specific person to properly gather their comments, and respond to their questions in a timely manner.

Through Questionnaire Survey. College may conduct the questionnaire survey on the application of CML service through student associations and other platforms, gather their comments and demands through questionnaire survey, make an effective classification and statistics of these comments and demands, and solve them one by one.

Through Social Media. College should advocate faculties and students to feedback the comments and suggestions when using the mobile library through weibo.com, renren.com, campus BBS and other social media. In general, this feedback would be more efficient.

Innovation Strategy of CML Service in the Context of Big Data

Big data is one of the technological achievements with revolutionary significance, as well as a milestone in technological breakthroughs, which means a great challenge and opportunity to CML [3]. Big data contains a multitude of literature data and technology, if compared with conventional digital database, its data content has been greatly increased. In the context of big data, it is obvious that CML development should further explore, improve the service level, and properly combine CML service with big data technology, rather than be over-conservative.

Advantages of the Big Data-Based Mobile Library. The Data Processing Capability Is Improved. With respect to the library data processing, big data platform has a unified comprehensive management, processing and analysis on massive literature data, if compared with the previous digital processing. Based on the previous data arrangement and dissemination, it has added the analysis and storage function of information resources, and its knowledge service mode has been further upgraded if compared with the past application.

The Performance Of Information Service System Is Further Improved. With respect to the connection of information service system, the big data-based mobile library is more deliberate, efficient and convenient. It also provides a special knowledge association network, allowing users to significantly decrease the difficulty level of analyzing the keywords in data.

Development Orientation of the Big Data-Based Mobile Library.

Build A “Cloud” Service Platform. Building a “cloud” service platform means a good opportunity in the context of big data, which contributes to exploiting the lasting, rapid and efficient advantages of the big data-based mobile library. In building, college should take a full account of the specific conditions of its mobile library, provided that CML has a multitude of literature data, numerous user groups, and intensive cultural atmosphere.

The construction of “cloud” service platform comprises three parts, namely CML, user groups and suppliers of “cloud” service platform. During the construction, college should fully understand the specific needs of faculties and students, and make a hands-on practice. Furthermore, it should organize the reading and sharing of individualized services and massive literature data, as well as the linkage among CML, users and suppliers, through “cloud” service platform.

Enhance the Construction of MOOC. The context of big data has also brought about an opportunity for the construction of MOOC. Colleges should make a good use of the opportunity, exploit the strengths of big data platform, produce a series of MOOC with characteristics, application orientation, which are popular among faculties and students, and provide instructional assistance for faculties and students.

In this regard, college library should exploit its existing big data technology, actively get involved in the planning and production of MOOC, act as a good teaching assistant, give some advice to teacher, and provide effective help and service for teachers. In addition, it should actively get involved in instruction, and help students gain the general knowledge of each online curriculum, help them select appropriate course, help them master the knowhow of MOOC system, help them solve the technical difficulties in using MOOC, and compile an effective online answer software specifically for them. Moreover, it should enhance the teaching management of MOOC, and provide
a good offline learning platform for them. Through a package of satisfactory services, MOOC will serve as a good instructional assistant.

**Conclusion**

The rapid development and popularization of mobile internet technology have expedited the mobile library as a new form of library service, which has been quickly applied in colleges and a new revolution takes place in college library service. Compared with conventional library, the mobile library has significantly improved the convenience of data retrieval and the sharing of resources, with an ample development prospect, especially for colleges, its practical usage is self-evident. In particular, the recent emergence of “big data” technology has introduced a new opportunity to the mobile library. In the new age, colleges should constantly make a deep-going innovation in the service mode of mobile library, so as to meet the needs of faculties and students.

**References**

