

# Library Service Innovation Based on New Information Technology: Taking the Interactive Experience Space “Tsinghua Impression” as an Example

Congming Liu, Tsinghua University Library, China

Tianfang Dou, Tsinghua University Library, China

Hong Zhou, Tsinghua University Library, China

Bei Zhang, Tsinghua University Library, China

Chengyu Zhang, Tsinghua University Library, China

## ABSTRACT

The development of new information technologies changes and affects the services in libraries. In this article, taking the interactive experience space “Tsinghua Impression” as an example, the authors analyzed the application of many new technologies in the information resource construction and information service of library and explained how to use multimedia, touch screens, 3D, and other technologies to enhance collections and services. They probed the new information technologies to promote the service innovation of the library in order to provide reference for the service innovation of the university libraries.

## KEYWORDS

Interactive Experience, Library Service, New Information Technology, Service Innovation, Service Mode

## INTRODUCTION

Library services combine the professional knowledge of the library by information technology. It not only needs the professional knowledge of Information organization and information retrieval, but also a combination of experience with user services and traditional library services. The innovation of library services not only need the innovation of thought, but also the innovation of technology.

The rapid development of information technology has broken the time and space restrictions of library services, lead great changes in the methods of services used in traditional libraries. The application of information technology in libraries not only expands the range and improves the quality of service, but also changes the mode of service in libraries. The rapid evolution of information technology brings opportunities and challenges to libraries. New technologies could improve the mode and quality of service, and meets the requirements of patrons better. Modern libraries cannot neglect the application of information technology. The quality of the service offered by a modern library directly depends on how it applies information technology. How to exploit the characteristics of various new technologies and make innovations in library service is a question that librarians face to.

In recent years, libraries in-house and outside have incorporated the use and design of space into service innovation of the libraries, and new information technologies apply to these spaces. For

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example, in 2011 an innovative space was set up in the Fayetteville Free Library in northern New York USA, and advanced software and 3D printing equipment were used to attract people to come to the library. In May 2013, the Shanghai Library built a new creative reading room that is open to the outside world. There is professional drawing equipment and design software including multimedia touchscreens, 3D printing and other devices, that make it easier for readers to communicate with each other and show their innovative results.

Library service innovation aims to integrate new ideas into traditional library services and to apply new information technology to library services, so as to transform the concept of service and improve the mode of service. In April 2016, the interactive experience space “Tsinghua impression” came into use in Tsinghua University Library. Figure 1 illustrates a Panorama of the interactive experience space “Tsinghua impression”. This space combines new technology with the reading habits of readers, and establishes a new service model.

## **APPLICATION OF NEW INFORMATION TECHNOLOGY IN THE INNOVATION OF LIBRARY SERVICES**

### **Using HTML5 Technology to Promote E-Book Lending Services**

HTML5 is the fifth revised standard of HTML and is a new generation of HTML. Its main goal is the semantics of the Internet. Semantics makes the Internet more readable for both human and machines, and better supports embedded multimedia devices. Therefore, HTML5 has the advantage of mobility and user-friendliness. It is widely used in various games and applications. With the development of information technology, libraries not only provide paper books but also offer e-books. Meanwhile, reading habits are changing from reading e-books on personal computers or laptops to reading them on tablets and mobile phones. Since HTML5 is friendly to various terminals, especially portable terminals, using HTML5 is an innovation and a major task for libraries.

In 2014, Tsinghua University Library applied HTML5 to its guidebook service platform, which was the first time a library uses this technology (Library, 2017). In 2015, with a developing demand for mobile reading, the library launched “Reading in Tsinghua” and “Weekly Selection”; a reading promotion platform and a weekly book recommendation program each week (Library, Reading in Tsinghua, 2017).

However, there are also problems with the reading promotion programs. Since the recommended books are usually best sellers, paper copies are inadequate, and cause patrons to wait in line to borrow a book. Though some of the recommended books have e-books, to read them patrons need special browsers that only supported by PCs or laptops, so it is still inconvenient for students to read the books.

We observed this situation and want to solve these problems. So we set up six columnar display screens in the interactive experience space “Tsinghua Impression”. They are e-book lending platforms. Figure 2 illustrates the six columnar display screens in the interactive experience space “Tsinghua Impression”. The screens show the book covers of recommended books, when you touch one cover, a QR code and the content abstract will be shown. To get a whole e-book, patron only needs to scan the QR code from the screen. Moreover, the patron can do a full text search, and chose to read in image pattern or text pattern, and share the book on the same platform.

All the books on the platforms have book information and recommendations provided by teachers in the library. After that information is recorded, the books are processed with OCR and HTML5 techniques to meet different needs of patrons. Finally, they are classified and put on the six different display screens. When borrowing the books, a patron does not need to input the title of the book. Instead, the patron can click the book cover on the screen, read its information and then scan the QR code to read the book on mobile phone or tablet. Another function of the platform is to provide statistical data for further analysis. In order to protect intellectual property rights, the platform has

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